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BOTANICAL MAGAZINE;

OR

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In which the most Ornamental FOREIGN PLANTS cultivated in the Open Ground,
the Green-House, and the Stove, are accurately represented and coloured.
To which are added,
THEIR NAMES, CLASS, ORDER, GENERIC AND SPECIFIC CHARACTERS,
ACCORDING TO THE SYSTEM OF LINNÆUS;
Their Places of Growth, Times of Flowering, and most approved
Methods of Culture.

CONDUCTED
By SAMUEL CURTIS, F. L. S.
THE DESCRIPTIONS
By WILLIAM JACKSON HOOKER, L. L. D.
F. R. A. and L. S. and Regius Professor of Botany in the University
of Glasgow.

VOL. IV.

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3038

OF THE NEW SERIES;
Or Vol. LVII. *of the whole Work.*

> "See, Mary, what beauties I bring,
> From the shelter of that sunny shed,
> Where the flowers have the charms of the spring,
> Though, abroad, they are withered and dead."

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1830.

SHOUT
SHARE
IT

TO

JOSEPH SABINE, Esq. F.R.S. L.S. &c. &c.

THE ABLE AND DISINTERESTED

SECRETARY

OF THE

HORTICULTURAL SOCIETY OF LONDON,

WHO HAS LABOURED WITH THE MOST UNWEARIED ZEAL,

BOTH THERE, AND IN HIS PRIVATE CAPACITY,

FOR THE ADVANCEMENT OF

BOTANY AND HORTICULTURE,

THE PRESENT VOLUME

IS INSCRIBED,

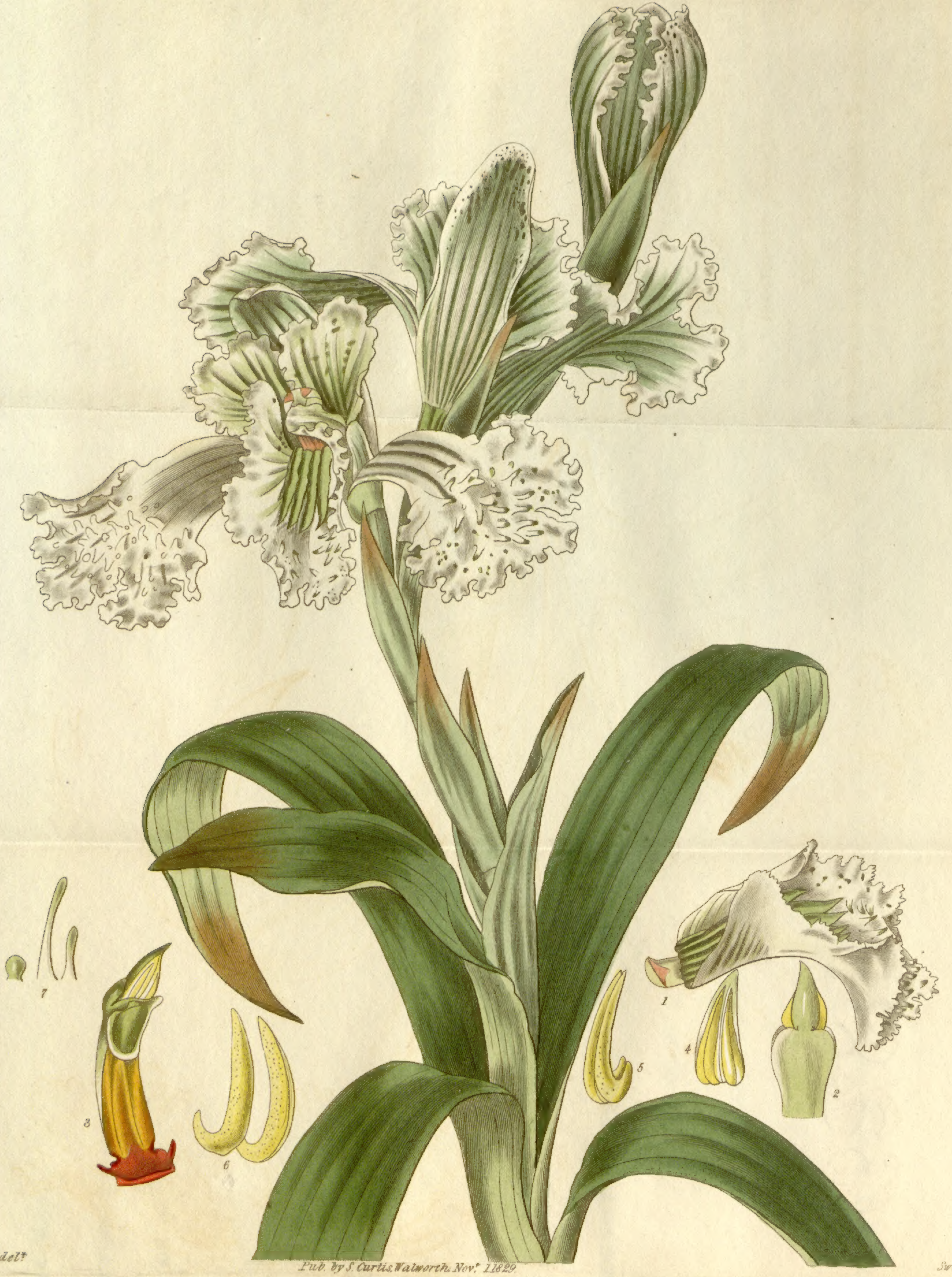
IN TESTIMONY OF HIS

UNFEIGNED REGARD AND ESTEEM, BY

THE AUTHOR.

December 1, 1829.

2956



W.J.H. delt.

Pub. by S. Curtis, Walworth, Novr. 1 1829.

Swan Sc.

(2956)

NEOTTIA? GRANDIFLORA. LARGE-FLOWERED NEOTTIA.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord. — ORCHIDEÆ.)

Generic Character.

Cor. ringens: petalis exterioribus anticis labello imberbi suppositis; interioribus conniventibus. *Columna* aptera. *Pollen* farinaceum.

Specific Character.

NEOTTIA*? *grandiflora;* labello oblongo medio lamellato, apice petalisque duobus inferioribus papillosis, petalo superiore oblongo integro, reliquis sinuato-crispatis.

DESCR. Terrestrial. *Stem* a foot high, clothed with many linear, oblong, acuminated, reflexed, glaucous, shining, and striated *leaves,* whose bases are sheathing, and their extremities tipped with brown; these leaves become smaller upward, and gradually change into lanceolate bracteæ. *Flowers* few, (three) in a terminal spike, very large and singular in their appearance. The *petals* or segments of the perianth all of a greenish colour, beautifully striated with a deeper line, their extremities and margins white. *Upper Segment* erect, oblong, obtuse, two inches long, the margin entire and even; the two interior ones are a little shorter, obovate, sinuated and plaited at the margin, the two lateral, or rather lowermost ones three inches long, spathulate, of a bluer green in the inside, the broad extremity remarkably plaited at the margin, while its surface is studded with many roundish or linear white papillæ, tipped with green. The *Labellum* is scarcely so long as these, reflexed, broadly oblong, the sides curved upwards, waved and plaited, especially at the extremity, where the surface is papillose as in the petals just described; at the base it is suddenly contracted into a short, white claw, having an orange spot at the base, and the inner surface for more than half the length is, in the middle, furnished with about six, vertical, green plates or lamellæ, of which the extremities are free, sharp, and curved a little upwards. *Germen* angular, thickened upwards. *Column* linear, oblong, decurved, semicylindraceous, within orange-coloured, marked with two depressed longitudinal lines, the base dilated, deep red, and marked with a tooth on each side: upwards in front is the subquadrate, depressed, green, *stigma,* terminated by a short bifid lip: the back of the column is green, and within the summit of it, which forms an imperfect upper lip, is situated the ovato-acuminate, green anther-case. *Cells* two, yellow, opening with a longitudinal fissure, and containing each two linear-acuminate, curved *Pollen-Masses,* yellow, and farinaceous indeed on the outside, but within, evidently formed of elastically cohering granules.

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* From *νοττια,* or *νοσσια, a bird's nest;* so called from a peculiarity in the roots of some species.

The Orchideous plants, formerly scarcely known in a state of cultivation, may now rank with the most numerous, and certainly the most curious and beautiful, of any tribes which adorn our stoves; and among those not parasitic, whose roots are imbedded in the ground, may assuredly be reckoned the kind now before us, which was sent to our Glasgow Garden by the Rev. LANSDOWN GUILDING, and blossomed in the stove of the spring of 1829. The uppermost flower scarcely came to perfection, and I have reason to believe, that another year will witness the plant in a greater state of beauty and magnitude than it exhibited this year. With regard to the Genus, it agrees with the essential character of NEOTTIA, as it is at present defined by Mr. BROWN; but the habit of the plant and the particular structure of its floral coverings are so much at variance with what we know of the rest of the NEOTTIÆ, that it will probably constitute a distinct Genus.

Fig. 1. Labellum, *nat. size.* 2. Back view of the summit of the Column. 3. Front view of the entire Column. 4. Anther-case. 5 and 6. Pollen-Masses. 7. Papillæ.—*Magnified.*

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HABENARIA LONGICAUDA. LONG-TAILED HABENARIA.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Cor. ringens. *Labellum* basi subtus calcaratum. *Glandulæ* pollinis nudæ distinctæ (loculis pedicellorum adnatis v. solutis distinctis). *Br.*

Specific Character.

HABENARIA *longicauda ;* labello profundo-trifido, laciniis setaceis, lateralibus petalorum interiorum bipartitorum longis incurvis, intermedio latiore breviore, cornu filiformi pedicellisque longissimis.

DESCR. *Root ?* *Stem* a foot and a half to two and even three feet high, every where clothed with the long sheathing bases of the leaves. *Leaves* lanceolate, acuminate, striated. four to five inches long, gradually smaller upward, and passing into the bracteæ. *Bracteæ* lanceolate, much shorter than the germens. *Flowers* in a large, terminal, lax, raceme. *Flowers* large, greenish white. Three outer petals, or segments of the perianth, three quarters of an inch long, ovate, acuminate, the two lateral ones reflexed, nerveless, the upper one erect, concave, three-nerved, covering the anther. Two inner ones bipartite, their segments setaceous, curved, long, the upper one, however, the shortest, and concealed within the upper and outermost petal. *Lip* deeply trifid, that is cut below the middle into three setaceous segments, of which, the two lateral ones are much the longest, not spreading, but nearly parallel with the middle one, curved upwards: intermediate one broader, hanging down: at the base, on the upper side, are no fleshy tubercles as in H. *macroceras:* from the base below depends a filiform cylindrical, or towards the extremity, slightly compressed spur, more than a span long. *Anther* erect, scarcely bifid: its two cells projecting at the base into two horn-like, fleshy processes, pointing upwards: (or these may perhaps be considered as belonging to the *column:)* below these, on each side, is a projecting, fleshy, clavate body, glandular on the outside, and at the extremity; the two abortive anthers. *Germen* oblongo-cylindrical, striated, twisted, tapering into a long pedicel. *Fruit:* a capsule two inches long, ribbed, crowned with the three outer, withered segments of the perianth.

Mr. PARKER gathered this most interesting plant in Demerara, and though we have not the good fortune to possess it in a living state, I do not despair of seeing it ere long cultivated in our stoves: and few plants can be more worthy the attention of the Horticulturist. In the mean time, I am anxious to figure such portions of the plant as may give a correct idea of its leaves and flowers, which I am able to do by means of specimens given me by Mr. PARKER, both in a dry state and preserved in spirits. The whole of the figures here given are of the natural size.

Fig. 1. Portion of the Stem with a Leaf. 2. Single Flower. 3. 3. 3. The three Outer Petals. 4. 4. The two Inner Petals. 5. Front view of the Anther and Lip. 6. Side view of the Anther and Lip, with a portion of the Germen, and of the Spur. 7. One half of the Column and Anther seen from within. 8. Capsule.—All of the *nat. size.*

NOTE. The author of the Botanical Register, (see December Number) under tab. 1290, seems to be of opinion, that the name CERATOCHILUS ought to have the preference to that of STANHOPEA. (See Botanical Magazine, tab. 2948–9.) But in this he is quite mistaken. Common justice requires me to state, that no character, whatever, has been given of the former Genus, nor any peculiarities mentioned or figured, as belonging to it, which could possibly enable me to distinguish it from other Orchideous Genera: (see LODDIGES' Botanical Cabinet, t. 1414.) In short, it is only a MSS. name of Mr. LINDLEY. Had it been otherwise, or had there been any means of identifying STANHOPEA with CERATOCHILUS, I would most cheerfully have acknowledged its prior claims.

W. J. H. delt

Pub by S Curtis Walworth Jany 1. 1830.

Swan Sc

MONARDA MENTHÆFOLIA. MINT-LEAVED MONARDA.

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Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord. — LABIATÆ.)

Generic Character.

Cal. tubulosus, dentatus. *Cor.* ringens: labio superiore lineari, filamenta involvente. *Semina* 4.

Specific Character and Synonym.

MONARDA* *menthæfolia;* caule piloso, foliis cordatis acuminatis serratis undique pilosis breviter petiolatis, floribus capitatis, involucris herbaceis venis purpureis.

MONARDA menthæfolia. *Graham Descr. Rare Pl. in Edin. Phil. Journ.* 1829, *p.* 347.

DESCR. *Stem* erect, tetragonous, purple, thickly covered with white pubescence. *Leaves* (an inch and a half long, ten and a half lines broad) spreading, decussated, on short petioles, cordate, acute, pale green, pubescent on both sides, especially below, acutely serrated, strongly veined, the uppermost pair closely embracing the capitulum, and having immediately within them four bracteas, two on each side, similar to themselves, but rather softer, of paler green, with red veins; within these, and surrounding the capitulum, are many unequal, subulate, ciliated, green *bracteas. Flowers* in a dense, terminal capitulum. *Calyx* tubular, slightly curved, nerved, smooth, except at the base of the teeth, where there is a whorl of spreading hairs: teeth short, acute, equal. *Corolla* lilac: tube clavate, curved, very slender, colourless, and smooth at its origin, everywhere else on the outside covered with short, dense tomentum, smooth within; upper lip straight, subulate, lower lip three-lobed, the central lobe the longest, linear, narrow, inflected, and cleft, the two lateral rounded, with erect edges. *Stamens* as long as the style, smooth; *anthers* transverse, flat, their upper edge deep purple, closely applied to each other, and embracing the stigma; *filaments* and *style* of the same color with the corolla. *Stigma* unequally bilobed. *Germen* four-lobed, erect, yellow, small. Perfume of the whole plant resembling Mint.

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* Named in compliment to NICHOLAS MONARDEZ, a Spanish Botanist of the 16th century.

The species of MONARDA are certainly in great confusion, and it is not without some hesitation that I have ventured to describe this as new; though there is none described, or in cultivation, which I can satisfy myself as being the same. It is nearly allied to M. *oblongata*, but is distinguished from it by the much more hairy stem, the harsher and less acuminated leaves, and shorter petioles. It was raised in the Edinburgh Botanic Garden, and in the garden of Mr. NEILL, of Canonmills, from seeds collected by Mr. DRUMMOND, between Norway House and Canada, and flowered freely in August. When very luxuriant in cultivation, the stem is ascending and less hairy, and very rarely it is continued through the capitulum. Even the native specimens vary in the degree of hairiness and the number and depth of the serratures in the leaves, which also differ in their breadth at the base, and are more or less elongated. The appearance of the less vigorous cultivated plants exactly resembles the few which are in Mr. DRUMMOND's Herbarium. GRAHAM.

Fig. 1. Calyx. 2. Corolla.—*Magnified.*

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SAXIFRAGA LEUCANTHEMIFOLIA. OX-EYE-LEAVED SAXIFRAGE.

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Class and Order.

DECANDRIA DIGYNIA.

(Nat. Ord.—SAXIFRAGEÆ.)

Generic Character.

Cal. 5-fidus, inferus, vel superus, vel semisuperus, persistens. *Pet.* 5. *Capsula* birostris, intra rostra dehiscens, polysperma, dissepimento placentifero, seminifero. *Spr.*

Specific Character and Synonyms.

SAXIFRAGA* *leucanthemifolia;* foliis fere omnibus radicalibus cuneato-oblongis grosse serratis, scapo ramosissimo divaricato, petalis inæqualibus tribus petiolatis bipunctatis.

SAXIFRAGA leucanthemifolia. *Mich. Bor. Am. v.* 1. *p.* 268. " *Lapeyr. Saxifr. t.* 25. *Pursh, Fl. Am. Sept. v.* 1. *p.* 311. *Spreng. Syst. Veget. v.* 2. *p.* 362.

SAXIFRAGA Clusii. " *Gouan, Illustr. p.* 28.

SAXIFRAGA ferruginea. *Graham in Ed. Phil. Journ. July,* 1828, *p.* 348.

DESCR. *Root* fibrous, perennial. *Leaves* almost entirely radical, spreading on the ground, one to two inches long, obovato-cuneate, obscurely nerved, deeply and coarsely serrated at the margin, at the base attenuated and entire. *Scapes,* several from the same root, and from the centre of the expanded leaves, erect, a span high, panicled from much below the middle, with numerous slender, red, glandular, extremely divaricated branches, each terminated with a single *flower*. At the base of the primary branches are small, linear *bracteæ*, larger and leafy in the lower part of the panicle. *Calyx* of five leaves, bent back so as to lie against the pedicel. *Stamens:* five become perfect before the other five: *Filaments* slender, white: *anthers* orange-colour, subglobose. *Petals* five, white; three upper ones the largest, exactly ovate, contracted at the base into a distinct pedicel or claw, and having each two roundish, yellow spots. Two *lower petals* oblong, narrower at the base, spotless. *Pistil: Germen* oblong, cleft into two, nearly erect *styles*, superior. The *Calyx* and *Stamens* persist long after the petals have fallen away.

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* From *saxum,* a stone, and *frango,* to break: because by their roots penetrating into the crevices of rocks and stones they appear to break them: or as some say, in allusion to the supposed medicinal qualities.

Nothing can appear more elegant than the flowers of this little-known SAXIFRAGE, when seen under a small power of the microscope, as represented at fig. 1. They have a considerable similarity to those of S. *stellaris:* near which the species ranks.

Our plants, from which the figures were taken, were raised in the Edinburgh Botanic Garden, from seeds which Dr. GRAHAM received from the Rocky Mountains of North America, where they had been gathered by Mr. DRUMMOND. The blossoms were in perfection in June, being produced upon plants, in pots, indeed, but in the open air.

Fig. 1. Flower. 2. Pistil.—*Magnified.*

W.J.H. delt

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(2960)

DESMODIUM DUBIUM. DOUBTFUL DESMODIUM.

Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. basi bibracteolatus, ad medium obscure bilabiatus, labio superiore bifido, inferiore 3-partito. *Cor.* papilionacea, vexillo subrotundo, carina obtusa non truncata, alis carina longioribus. *Stam.* diadelpha (9 et 1) filamentis subpersistentibus. *Legumen* constans articulis plurimis ad maturitatem secedentibus, compressis, monospermis, membranaceis coriaceisve, non aut vix dehiscentibus. *D C.*

Specific Character and Synonym.

DESMODIUM[*] *dubium;* foliis trifoliatis, foliolis obovatis subretusis mucronulatis pubescenti-pilosis, subtus pallidioribus, racemis elongatis multifloris terminalibus, bracteis subulatis pedicellos æquantibus, caulibus angulatis calycibusque hirsutis.

DESMODIUM dubium. *Lindl. in Bot. Reg. t.* 967.

DESCR. A suffruticose plant, with upright, slender, angular, branching, and hairy *stems*. *Leaves* ternate. *Leaflets* large, the terminal one exactly obovate, upon a long petiole, the lateral ones more oblong, sessile, all of them very obtuse or almost retuse, clothed with short, soft, and fine, rather silky, appressed hairs, green above, paler beneath. Main *petiole* with swollen joints, having a pair of small, pointed *stipules* at the base, and a smaller pair a little way up. *Racemes* terminal, longer than the leaves, many flowered, and lengthening much when all the flowers are expanded. *Bracteæ* long, subulate, about as long as the slender, red, pedicels of the flowers. *Flowers* at first drooping, then patent. *Calyx* slightly hairy, reddish green, two-lipped, upper lip bifid, lower lip trifid. *Petals* of a pale rose colour. *Vexillum* obovate, having two oblong, white spots within near the base. *Alæ* and *keel* alike in shape, the latter smaller. *Stam.* diadelphous. *Germen* linear. *Style* curved upwards. *Stigma* obtuse.

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[*] From δεσμος, *a chain,* from the articulated seed-vessels.

This is a pretty greenhouse plant, blossoming in June and July, and was drawn from specimens sent by Dr. GRAHAM, which he had raised at the Edinburgh Garden from seeds sent by Dr. WALLICH.

From the Botanical Register we learn, that the plant is a native of the Himala Mountains.

Fig. 1. Flower. 2. Vexillum. 3. Keel and one of the Alæ. 4. Calyx, Stamens, and Pistil. 5. Pistil.—All more or less *Magnified.*

W. J. H. Delt.

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Swan Sc.

(2961)

ANTHOCERCIS VISCOSA. GLUTINOUS ANTHOCERCIS.

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Class and Order.

DIDYNAMIA GYMNOSPERMIA.

(Nat. Ord.—SOLANEÆ. Sect. II. *Br.*)

Generic Character.

Cal. 5-fidus. *Cor.* campanulata, tubo basi coarctata staminifera; limbo 5-partito, æquali. *Stamina* inclusa, didynama, cum rudimento 5-ti. *Stigma* capitato-emarginatum. *Caps.* bilocularis, bivalvis, valvarum marginibus inflexis, placentæ parallelæ insertis. *Semina* reticulata. *Br.*

Specific Character and Synonyms.

ANTHOCERCIS[*] *viscosa;* foliis obovatis glanduloso-punctatis margine scabriusculis, novellis ramulisque tenuissime pubescentibus, capsula ovata calycem subæquante. *Br.*

ANTHOCERCIS viscosa. *Br. Prodr. Fl. Nov. Holl. p.* 448. *Spreng. Syst. Veget. v.* 2. *p.* 841.

DESCR. Apparently a low *shrub,* with alternate, obovate, somewhat fleshy *leaves,* obtuse or even retuse at the extremity, at the base attenuated, but not petioled, the margin scabrous, though not visibly so to the naked eye, the surface both above and beneath punctated with glandular, brown dots. *Peduncles* axillary, solitary, single-flowered, having two or three linear or linear-lanceolate, green, bracteæ; these peduncles become considerably elongated when bear-

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[*] From ανθος, *a flower,* and κερκις, *a ray,* in allusion to the radiated limb of the Corolla.

ing the fruit. *Calyx* deeply five-cleft, with linear-lanceolate, erecto-patent segments. *Corolla* ample, white, campanulate, the limb five-cleft, with spreading, oblong segments, externally with minute, glandular pubescence, the tube within streaked with green. *Stamens* four, didynamous, inserted at the base of the tube. *Anther* roundish, two-lobed, their back turned towards the pistil. *Stigma* capitate, two-lobed.

This is much the finest species of the Genus, having flowered considerably larger than those of the only other hitherto described individuals, A. *littorea*, BROWN, and R. *albicans* *, of CUNNINGHAM, in Mr. BARRON FIELD's Memoirs of New Holland. It was discovered by Mr. BROWN on the Southern shores of New Holland. Seeds were gathered by Mr. ALLAN CUNNINGHAM at King George's Sound, during the fourth voyage of survey of Capt. KING, and sent to the Royal Gardens at Kew, where the plant blossomed in May, 1824.

The drawing was kindly communicated to me by W. T. AITON, Esq. The figure of the Anther and Stigma, and the description, are from a dried specimen in my Herbarium, gathered by Mr. WAKEFIELD, in King George's Sound, and sent to me with many other rarities by Mr. FRASER.

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* A fourth species has been sent to me by Mr. FRASER from the Swan River, which I name

A. *ilicifolia;* foliis obovatis glabris spinoso-dentatis munitissime punctatis, ramis longissimis virgatis, corollæ laciniis tubo brevioribus, capsula oblonga calyce quintuplo longiore.

This grows to the height of six feet, and is widely different from the other known species.

Fig. 1. Back view, and 2, front view of a Stamen. 3. Stigma.—*Magnified.*

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W.J.H. del.ᵗ Pub. by S. Curtis. Walworth. Jan.ʸ 1. 1830. Swan Sc.

BEGONIA PICTA. PARTICOLOURED BEGONIA.

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Class and Order.

MONŒCIA POLYANDRIA.

(Nat. Ord. — BEGONIACEÆ.)

Generic Character.

MASC. *Cal.* 0. *Cor.* polypetala. *Petala* plerumque 4, inæqualia. FÆM. *Cal.* 0. *Cor.* petalis 4—9, plerumque inæqualibus. *Styli* 3, bifidi. *Caps.* triquetra, alata, trilocularis, polysperma.

Specific Character and Synonyms.

BEGONIA *picta;* caule brevi pubescente, foliis cordatis acutis acuminatisque rugosis duplicato-serratis maculatis hispidis, flore masculino 4-petalo, fæmineo 5-petalo utroque petalis 2 angustioribus, capsula alis inæqualibus pubescentibus.

BEGONIA picta. *Smith Ex. Bot. t.* 101. *Hook. Ex. Fl. t.* 89. *Lodd. Bot. Cab. t.* 571.

BEGONIA hirta. *Wall. MSS.*

DESCR. *Stem* about a span high, arising from a tuberous *root,* herbaceous, scarcely branched, reddish, slightly downy, green above. *Leaves* cordate, more or less inæquilateral, with a deep sinus at the base, and two large, rounded lobes, rather obtuse, the margins unequally and doubly serrated, downy beneath, where the nerves are very prominent, hispid above, at the margins and axils of the nerves stained with dark purple. *Peduncles* from the axils of the leaves, and longer than them, reddish below, green above, bearing one or several flowers, often in a trichotomous umbel. *Flowers* large, rose coloured, very handsome, drooping before and after expansion, especially the female. *Male Flower* of four spreading *petals,* two large, roundish-cordate, hispid, with short, red hairs at the back, two inner ones obovate. *Female* of five *petals,* three outer ones rotundato-ovate, hispid at the back, two inner smaller, and obovate. *Germen* inferior, turbinate, downy, with three wings, one large and two smaller ones, each dilated upwards into an obtuse angle. *Stamens, Style,* and *Pistil* as in most of the Genus.

Neither my own figure in Exotic Flora, nor that of LODDIGES in the Botanical Cabinet, does justice to the beauty of this plant, and the size of its flowers. This is often the case with plants that are figured when they first bloom after their introduction to this country; afterwards they become stronger, and flower in much greater perfection.

B. *picta* was first figured by Sir JAMES E. SMITH in the Exotic Botany. It is a native of Nepal; but probably of the warmer parts: for it seems to flourish best with the heat of our stoves, in which situation, the plant from which our figure and description were taken flowered in the Glasgow Botanic Garden, and in the month of September, 1829.

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[illegible] Esq. del.

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Swan Sc.

(2963 2964)

CYCAS REVOLUTA. NARROW-LEAVED CYCAS.

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Class and Order.

DIŒCIA POLYANDRIA.

(Nat. Ord.—CYCADEÆ. *Pers. Rich.*)

Generic Character.

Fl. dioici. MASC. amentacei; *amentum* crassissimum, squamis subimbricatis, axi communi insertis, subtriangulatis, inferne angustatis, apice mucrone recurvo terminatis, subtus inordinate antheris bivalvibus conspersis. FÆM. in spadices ensiformes, foliaceo-carnosos, marginibus dispositi, erecti, semi-immersi, in utroque margine 3—4. *Fructus* drupacei, erecti.

Arbores *stipite erecto, tereti;* foliis *coronantibus, pinnatis.* Rich.

Specific Character and Synonyms.

CYCAS* *revoluta;* foliorum pinnis numerosissimis linearibus mucronatis margine revolutis, petiolo triangulato spinuloso, spadicibus fœmineis paucifloris apice inciso-palmatis.

CYCAS revoluta. *Thunb. Jap. p.* 229. *Smith in Trans. Linn. Soc. v.* 6. *p.* 312. *t.* 29, 30. *Willd. Sp. Pl. v.* 4. *p.* 844. *Spreng. Syst. Veget. v.* 3. *p.* 907.

ARBOR RAGOE Amboinensis. *Seb. Thes. v.* 1. *t.* 25. *f.* 1.

ARBOR CALAPPOIDES sinensis. *Rumph. Amb. v.* 1. *p.* 92. *t.* 24.

TESSIO, vulgo. *Solitz et Sodetz. Kœmpf. Amæn. Exot. p.* 897.

DESCR. *Stem* or *Trunk* three to five feet high in the plant here figured, and of considerable thickness, one foot,

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* From κυκας, the name of a Palm in THEOPHRASTUS.

foot or more in diameter; of a dark brown colour, clothed with withered, reflexed scales, and annulated from the scars of the former years' circles of leaves. From the summit of this stem springs a beautiful crown of feathery, lively-green foliage; each *leaf* five to six feet long, spreading, most beautifully pinnated: *pinnæ* numerous, close set, linear-mucronate, dark green above, having a strong midrib, paler beneath, where the midrib is prominent, and the margin bent down or involute. *Rachis* cylindrical. *Stipes* one to two feet long, triangular, with a row of spines on each side, which are abortive pinnæ. From the centre of this superb crown of leaves, the fructification appears. The *Male* I have never seen; nor do I know that it is any where correctly described. Even the *Female* I have not seen in the state of the germen. But the spadices of fruit which have been sent me in spirits, have advanced germens, which are roundish, compressed, notched, and woolly. About six are inserted, three on each side of a long, compressed, woolly, orange-coloured spadix, digitato-laciniate at the extremity, about a span long, and more or less incurved at their apices. These *germens* are quite destitute of perianth, and even when not fertilized, change into an orange-coloured, downy *fruit*, compressed, and notched at the extremity. The down soon disappears, and then the fruit becomes glabrous and deeper coloured, more inclining to red. Within the sinus of the notch is a raised papilla, small, with a circular, margined mouth. *Nut* oval, a little attenuated at the base, at the apex apiculated, with a sharp point, which answers to the papilla above mentioned. Within, these *nuts*, not having been fertilized, exhibit only a withered and imperfect kernel, which it would be useless to describe. The fruits abound in a white, transparent mucilage.

Having already at Tab. 2826 and 2827 of this work given figures and a description of the more rare Cycas *circinalis*, I felt anxious to add a representation of the *C. revoluta*. Sir James Smith has, indeed, given a very good figure in the Transactions of the Linnæan Society above quoted, from a plant that bore its female blossoms in the stove of the Bishop of Winchester, in 1799. But that belongs to a work which is in the hands of few. I am not aware that any plant has besides flowered in this country, till about the latter end of the present summer, (1829,) when Lord Milton politely invited me to Wentworth House, to see a specimen, then loaded with its rich and downy

orange-

2964.

W.J.H. del.t Pub. by S. Curtis Walworth Feby. 1.1830. Swan Sc.

orange-coloured fruits, in the gardens of that noble mansion. My avocations prevented me at the time from taking so long a journey, which I should otherwise most gladly have done. But, fortunately, at that very period, my valued friend, the Rev. R. T. Lowe, sent me a beautiful drawing of a plant which had flowered in Madeira, together with some spadices in spirits. From these, the accompanying engravings have been made. Mr. Lowe writes me respecting this Madeira plant, " It grows in front of the Quinta do Valle, or Valle Villa, a spot whose elevation is about three hundred feet above the level of the sea. It has produced fruit, (abortive like that sent,) every alternate year for a long time till the very last; but the gentleman who resided in the house having left the island last summer, the plant was neglected; and this year it has not, as usual, put out a fresh crown of leaves. The usual treatment has been, to cut off the whole of the leaves as soon as the fruit of the year had nearly perished; that is, towards January or February: and then, towards the spring in May or June, it never failed to put forth a new crown of leaves, which, about the middle of summer, attained their full size. These continued through the winter, and the fruit began to develop itself in their centre, towards June or July of the following year, arriving at its full size in September. Last winter, the foliage of the summer of 1827 was not cut off, as I said, after the fruit had perished, and is at this moment on the plant. About last March, there seemed to be an effort to shoot out fresh leaves, by the protrusion of a conical groupe of sharp-pointed processes from the centre of the withered spadices and fruit, but nothing more has yet appeared. The fruit acquires its fine orange-colour very early, and is about the size of a horse-bean. I have just been to take the following measurements. Height of trunk (to the base of decayed remains of last summer's fruit,) three feet nine inches. Girth at the ground, three feet three inches; at middle and at top, three feet four inches. It appears to the eye, however, a good deal thicker upwards. There are twenty-four leaves, (the crown is not quite perfect, as you will see in the figure,) which are from three feet seven inches to three feet ten inches long, still exhibiting no signs of decay; and there is no appearance of fresh ones, except the cone of processes above mentioned. Counting the alternate remains of leaf-stalks and spadices, (distinct traces of the last occur at the very lowest ring above the surface of the ground) the plant is forty-five to fifty years old. It has occupied its present

present place probably twenty or thirty years. The sketch, which is most accurate and faithful, was taken in November last, before the fruit was set, by my friend, **Francis Hyde**, Esq. lately of the 12th Lancers." The taste of the fruit is mealy, dry, and sweetish, but insipid. It is the general opinion here, that this is the Sago Palm, or the plant that produces Sago. The Japanese, of whose country the plant is a native, eat the fruits; and from the trunk extract a kind of Sago, which is highly esteemed, especially by the people of rank. On this account, the plant is much cultivated about their houses, and is forbidden to be exported. A very small quantity of the medulla or pith suffices to satisfy the hunger of a soldier in the time of war.

Cycas *revoluta* is frequently cultivated in the stoves of the curious in this country; but it requires considerable space to be seen to advantage. The general structure both of the male and female flowers and fruit will prove, in all probability, very similar to those of C. *circinalis,* already given in this work.

Tab. 2963. Plant of Cycas *revoluta* much reduced. Fig. 1. A leaf upon a larger scale; but still considerably reduced.

Tab. 2964. Fig. 1. Spadix with (abortive) Fruit. 2. Nut taken out from a Drupe. 3. Summit of the Drupe a little *magnified,* shewing the Papilla in the Sinus. 4. Portion of a Leaf. 1, 2. and 4.—*Natural size.*

2965.

R. K. Greville Delt.

Pub. by S. Curtis Walworth Feb 1 1830.

Swan

(2965)

SISYRINCHIUM PEDUNCULATUM. LONG-STALKED SISYRINCHIUM.

Class and Order.

MONADELPHIA TRIANDRIA.

(Nat. Ord. — IRIDEÆ.)

Generic Character.

Spatha diphylla. *Perianthium* simplex, corollinum, profunde sex-partitum, æquale. *Filamenta* connata. *Stylus* simplex. *Stigma* trifidum. *Capsula* tri-locularis, infera.

Specific Character and Synonym.

SISYRINCHIUM* *pedunculatum*; caule folioso teretiusculo, foliis ensiformibus, pedunculis elongatis simplicibus, spathis exterioribus ovatis marginibus membranaceis, interioribus scariosis albidis, perianthii laciniis obovatis basi angustatis, staminum columna densissime glanduloso-pilosa, stigmatibus brevissimis, ovario glabro.

SISYRINCHIUM pedunculatum. *Gillies MSS.*

DESCR. *Root* fibrous. *Stems* one, to one and a half and two feet high, rounded, or but slightly compressed, zigzag, leafy. *Leaves:* radical ones, six to eight inches long. *Stem-leaves* remote, gradually shorter upwards, linear-ensiform, sheathing at the base, and there laterally compressed, acuminated, striated, the uppermost one conduplicate, and a little membranous at the edge. *Peduncle* solitary, or two to four, from within the upper complicated leaf or *Bractea*,

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* From συς, a hog, and ρυγχος, a snout, applied to some bulbous plant, and spoken of by PLINY and THEOPHRASTUS.

four to six inches long, terete, bearing a single head of flowers within a diphyllous spatha, with green, concave, ovate leaves, white and membranaceous at the margin, four to five flowered, each *flower* emerging from a large, almost entirely white and scariose, convolute, *bractea*. *Perianth* cut into six, obovate, spreading, deep yellow segments, a little concave in their lower half, and there narrow, with a small dark purple spot at the very base. *Column* of filaments long, densely covered with rather long, glandular, yellow hairs. *Anther* short, yellow, just below the slightly protruded tip of the *style*, with its three very short *stigmas*. *Germen* oblong, glabrous. *Capsule* oblong, attenuated, three-valved.

A native of Chili, where it has been found both by Dr. GILLIES, and Mr. CRUICKSHANKS. From the latter I have dried specimens. To the former we are indebted for its introduction to our greenhouses ; it having been raised at Mr. NEILL's Garden at Canonmills, from seeds sent by Dr. GILLIES. It first flowered in June, 1828. The same plant produced again, during the summer of the present year, (1829,) a succession of blossoms which lasted many weeks, and yielded seed, from which many plants have been raised.

Fig. 1. Column of the Stamens, with the slightly protruded Style and Stigmas. 2. Capsule, included in its scariose Bractea.—*Magnified.*

2966.

R. K. Grevill del.

Pub. by S. Curtis. Walworth. Feb. 1 1830.

Swan

BEGONIA DIVERSIFOLIA. VARIOUS-LEAVED BEGONIA.

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Class and Order.

MONŒCIA POLYANDRIA.

(Nat. Ord.—BEGONIACEÆ.)

Generic Character.

MASC. *Cal.* 0. *Cor.* polypetala. *Petala* plerumque 4, inæqualia. FÆM. *Cal.* 0. *Cor. petalis* 4—9, plerumque inæqualibus. *Styli* 3, bifidi. *Caps.* triquetra, alata, trilocularis, polysperma.

Specific Character and Synonymn.

BEGONIA *diversifolia;* herbacea, glaberrima, foliis radicalibus reniformibus late crenatis, caulinis sublobatis inæqualiter argute serratis superioribus inæqualiter cordatis, inferioribus reniformibus, floribus axillaribus congestis, pedunculis petiolos æquantibus vel superantibus ramosis, capsulæ ala maxima acutangula. *Graham.*

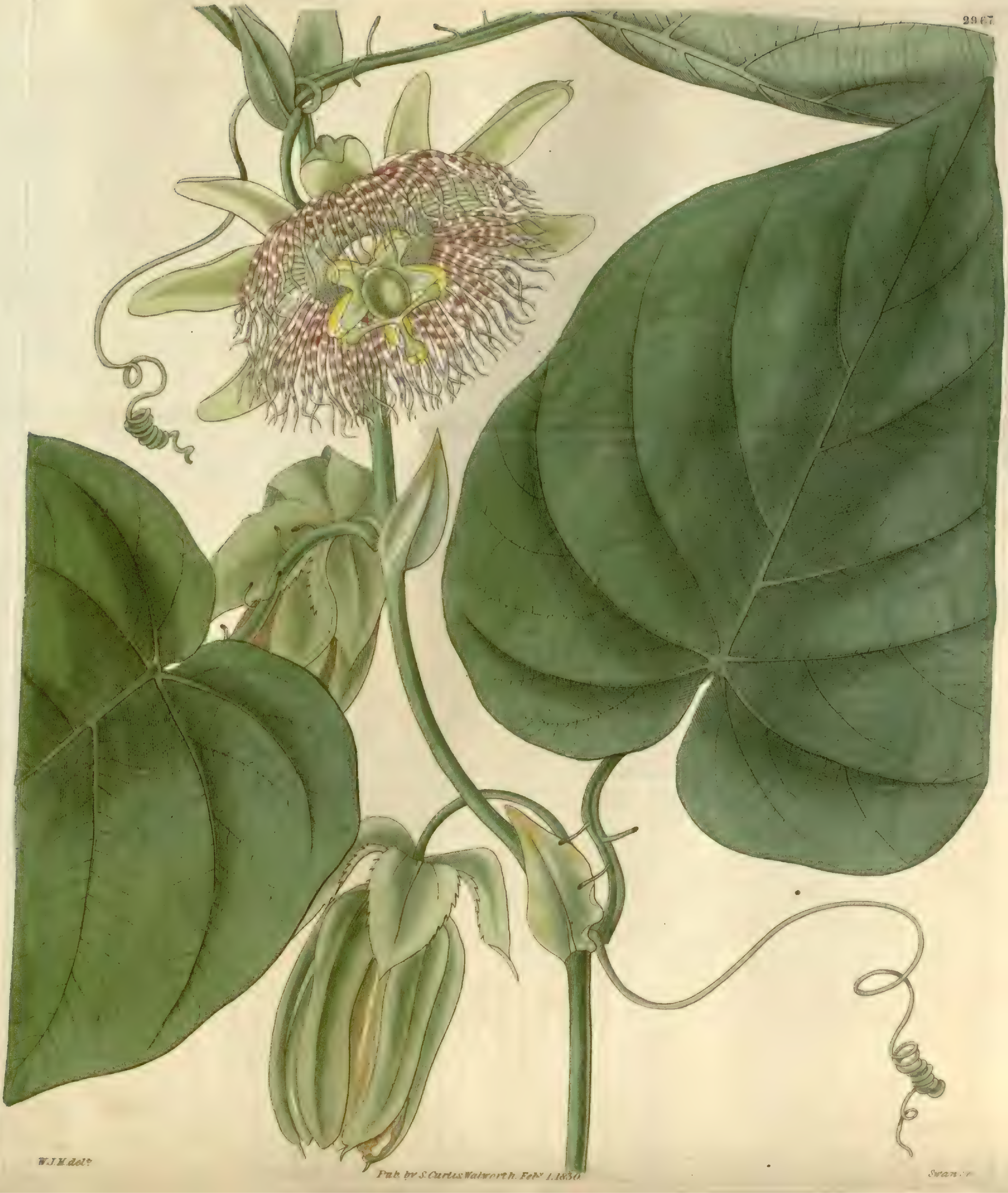
B. diversifolia. *Graham Descr. of New Pl. in Edin. Phil. Journ.* (1829.) *p.* 183.

DESCR. Whole plant smooth and shining. *Stem* herbaceous, twining, branched, smooth, very obscurely angled, transparent. *Stem-leaves* alternate, petiolated, half-cordate, acuminate, somewhat lobed towards the base, acutely and unequally serrated, smooth, bright-green above, paler and somewhat glaucous beneath. *Nerves* branched, and prominent behind. *Petioles* shorter than the leaves, spreading, flattened on the upper side. *Root-leaves* kidney-shaped, nearly equal at the base, broadly crenate, on *petioles,* many times longer than themselves, and which are slightly compressed at the sides, and channelled above; a few leaves at the bottom of the stem resemble these, but are on shorter petioles, and have their edges pretty equally lobed, the lobes being unequally and sharply serrated. *Stipules* ovate, oblique, green, ciliated. *Peduncles* axillary, about as long as the petioles on the lower part of the stem, longer above, slightly compressed, bracteated, pedicels rising from the axils of the bracteas, solitary, or two together, a male and female. Occasionally the peduncle is twice divided, with a pair of opposite *bracteas* at each division; and it is extremely probable, that at another season of the year, the inflorescence would look very differently, and the plant assume a much handsomer appearance, from perfecting many more *flowers:* for in the axil of each leaf, from whence the peduncle springs, and in the bosom of each bractea, there is a cluster of flower buds. *Bracteas* cordato-ovate, concave, blunt, entire, shorter than the pedicels. *Corolla* rose-coloured; outer *petals* cordato-ovate, pointed, sharply serrated; inner *petals* obovato-elliptical, entire, subacute. *Stamens* yellow, monadelphous; union of the filaments extending high. *Anthers* (as is common in the whole of this genus) obovate, truncated, compressed, the *pollen cases* being distant, lateral, and connate. *Germen* with three unequal sides, unequally winged, of three somewhat unequal loculaments, each containing a large, green, bipartite, waved, seminal receptacle, covered with minute *ovules;* the largest wing acute, the second subacute, and the third very small and rounded.

As far as I can judge by the imperfect characters which have been published of this beautiful and extensive Genus, the present species is undescribed. It was raised from seeds, sent from Rigla in Mexico, by Captain VEITCH, to P. NEILL, Esquire, in whose stove at Cannonmills, near Edinburgh, it flowered in October, 1829. GRAHAM.

We are indebted to the pencil of Dr. GREVILLE for the drawing from which our engraving was taken.

Fig. 1. Capsule.—*Natural size.*



W.J.H. delᵗ.

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Swan sc.

PASSIFLORA LIGULARIS. AMPLE-LEAVED PASSION-FLOWER.

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Class and Order.

MONADELPHIA PENTANDRIA.

(Nat. Ord.—PASSIFLOREÆ.)

Generic Character.

Cal. 10-partitus, laciniis interioribus corollinis. *Corona* radiata perigyna. *Nectarium* in fundo calycis. *Tubus* staminifer stylum cingens. *Stigmata* 3, clavata. *Pepo* 1-locularis, placentatio parietalis. *Spr.*

Specific Character and Synonyms.

PASSIFLORA *ligularis;* involucro subflore triphyllo, foliolis ovatis serratis, foliis glabris cordatis integerrimis, petiolis glandulas subsex filiformi-clavatas gerentibus, stipulis ovato-acuminatis, pedunculis solitariis unifloris.

P. ligularis. *Juss. Ann. du Mus. d'Hist. Nat. v.* 6. *t.* 40. *Humb. et Kunth, Nov. Gen. et Sp. v.* 2. *p.* 128. *Prodr. v.* 2. *p.* 433. *De Cand. Prodr. v.* 3. *p.* 329. *Spreng. Syst. Veget. v.* 3. *p.* 36.

DESCR. *Stem* climbing, of great length and much branched, woody below, and somewhat corky, the young shoots herbaceous, somewhat flattened, glabrous. *Leaves,* many of them a span long, perfectly glabrous, cordate, more or less acuminate, with a deep and narrow sinus at the base, with many nerves and numerous minute connecting veins, entire at the margin, bright green above, pale and glaucous beneath. *Petioles* three to four inches long, grooved above, having on each side the groove, generally, three filiform, clavate, green *glands,* two to three lines long. *Stipules* large, herbaceous, ovate, acuminate, entire, or minutely serrated at the margin, especially towards the extremity.

Cirrhi axillary, long, simple. *Peduncle* axillary, solitary, bearing a single large *flower*. *Involucre* of three large, ovato-acuminate, serrated, green *leaflets*, a little distant from the flower. *Leaflets* of the calyx oblong, the five inner subpetaloid, the five outer more herbaceous, with a soft mucro at the point. *Corona* as long as the calyx, curved upwards, its rays white, fasciated or annulated with reddish-purple, almost blue at the extremity. The base of the nectary within is white, and covered with small fleshy tubercles. *Anthers* large, oblong, flat, yellow-green at the back. *Germen* oval, green, smooth, on a long pedicel. *Styles* three, spreading, tipped with the club-shaped *stigmas*. The fruit I have not seen, but M. BONPLAND has stated it to be of the size and shape of an orange, good to eat, and of an agreeable flavor.

This fine Passion Flower recommends itself, not only by the beauty and delicacy of its blossom, but by the size and rich green of the foliage. It is a native of Peru, and was first discovered by DOMBEY. It flowered in the Glasgow Botanic Garden, in September and October, 1829; that establishment being indebted for plants to the sister institution at Edinburgh, and to the Lord Justice CLERK for seeds, of this hitherto little-known Passion Flower.

2968.

Lady Frances Cole Del.t Pub. by S. Curtis Walworth. Feb.y 1. 1830

CERBERA TANGHIN. POISON TANGHIN.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord. — APOCYNEÆ.)

Generic Character.

Cor. infundibuliformis, tubo clavato, fauce 5-dentata. *Antheræ* subsessiles summo tubo impositæ, a stigmatis foveolis exceptæ. *Drupa* putamine fibroso ligneo, 1—2-sperma. *Spr.*

Specific Character and Synonyms.

CERBERA* *Tanghin;* foliis confertis, ramis erectis, floribus paniculatis terminalibus. *Poir.*

TANGHINIA venenifera. *Poirét in Encycl. Bot. Suppl. v.* 5. *p.* 283.

TANGHINIA. *P. Thouars, Gen. Nov. Madag. p.* 10. *Voa Tanghin. Madag.*

DESCR. This constitutes a tree in its native climate, having crowded or clustered *leaves* and erect *branches.* The *Leaves* are from four to six and eight or ten inches long, lanceolate, tapering at the base, subcoriaceous, quite entire. *Flowers* in large terminal *panicles,* with white *flowers,* having a tinge of rose-color on the outside, and a deeper red circle round the mouth. " *Calyx* 5-fid, patent. *Corolla* longer than the calyx, funnel-shaped, dilated upwards, the limb plain, contorted, five lobed. *Stamens* five; *Anthers* sessile, inserted into the dilated part of the tube, heart-shaped, having a tubercle under each. *Germen* double. *Style* single. *Stigma* capitate, with two tubercles at the point, included within the anthers. *Drupes* two, or by abortion solitary, pyriform, acuminated. *Nut* filamentous, woody. *Albumen* none. *Cotyledons* long, thick, concave." P. THOUARS.

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* From *Cerberus,* on account of its injurious or poisonous qualities.

The *Tanguen* or *Voa Tanghin, Tanghinia* of AUBERT DU PETIT THOUARS, has been known to Europeans only as a native of Madagascar, and from the account given of it by ROCHON, that "it produces a wood which is hard and veined, fit for carpentery, and inlaying work, and of which the fruit is a most dangerous poison, too well known, and employed by the natives." DU PETIT THOUARS named the plant TANGHINIA; but at the same time observed how closely allied it was to the CERBERA *Manghas*. He even doubted if it were not the same. These doubts are now removed by the plant having been cultivated in the Mauritius, and being thence introduced, through the medium of CHARLES TELFAIR, Esq. to the rich collection at Bury Hill, where it stands in the same house with the true C. *Manghas*. As yet, however, it has not blossomed, and as the plant, according to M. THOUARS, becomes a *Tree*, (ARBOR *elegans*,) a period of some years may still elapse before its flowers appear.

In the mean time, we are not without the means of gratifying the public with a figure of this plant. Mr. TELFAIR has obligingly communicated to us a beautiful drawing of a *Tanghin* which flowered at Reduit, in the Mauritius, from the pencil of the Honorable Lady FRANCES COLE, the Lady of His Excellency, the Governor of the Island*. This figure is upon so large a scale, that we cannot presume to do justice to it in the humble form in which the Botanical Magazine appears. The drawing of the fruit is by Mrs. TELFAIR. The value of this communication has been much increased by the addition of the history of the use to which the poison was put by the former kings of the island of Madagascar. "The kernel of the fruit," Mr. TELFAIR writes in his letter from the Mauritius, dated March 8th, 1829, "must be a very powerful poison. It is not much larger than an almond, and yet is sufficient to destroy above twenty persons. RADAMA, the late king of Madagascar, abolished the use of it as an ordeal; whether the custom has been revived by the new government I know not. It was with great difficulty that the chieftains could be persuaded to admit of the abolition of an usage, which had existed from time immemorial, and whose unerring efficacy in the detection and punishment of crime, had never been questioned, until Mr. HASTY, our Government agent, had acquired such an influence with RADAMA and his court, as to admit of the exposure of its fallacy. But this was the work of years; and although RADAMA was at length himself convinced that nothing could be more unjust, than the continuance of the practice, he dared not so far shock the prejudices of his people, as to order that it should cease. Even the chief performers in the ceremony, the "Skids," as they are called at Tanararissoo, who unite in their own persons the offices of priests and physicians, and who administer the poisonous kernel to the victims, never doubt its power of revealing guilt or clearing innocence; the last occasion on which it was practiced in RADAMA's reign, and of which he availed himself to effect its discontinuance, personally regarded his court and attendants. The king was affected with a complaint of the liver, for which the "Skid" prescribed some inefficacious remedies, and as the disease became worse, Mr. HASTY gave him some calomel in doses, which he had found by experience to relieve himself under similar symptoms. The disease disappeared, but Ptyalism was produced, and alarmed the king's family, who believed that he was poisoned, and insisted that all his immediate attendants should be put to the ordeal of the *Tanghin;* and the royal Skid was most earnest in pressing to have it performed, although he himself, from his rank and place, was among the first to whom it would be administered. In vain the king protested that he felt himself cured, and that the indisposition and soreness of the mouth was caused by the medicine that had relieved him, and which would pass off in a few days. The Skid insisted, the ministers and principal chieftains joined with the family in requiring the ordeal; to which the king, in spite of his convictions, was compelled to consent; but at the same time, he made it a condition that this should be the last exibition of the kind, and he bewailed the necessity which deprived him of so many attached dependants, whose fate he had predicted, while he protested his conviction of their innocence.

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* Now Governor of the Cape of Good Hope.

The king's servants, including the Skid, were more than twenty in number; they were shut up at night separately, and not allowed to taste food; the next morning they were brought out in procession, and paraded before the assembled people; the presiding Skid had the *Tanghin fruit* in readiness; after some prayers and superstitious evolutions, he took out the kernel, which he placed on a smooth stone, and with another stone broke down a part of it into a soft white mass like pounded almonds. The victims were then brought separately forward, each was questioned as to his guilt, and if he denied, his arms were tied behind, and he was placed on his knees before the Skid, who put a portion of the pounded kernel on his tongue and compelled him to swallow it. Thus the kernel was shared among all the king's personal servants. On some of the individuals the action began to operate in half an hour or less. The Skid takes particular notice how they fall, whether on the face, to the right or left hand, or on the back, each position indicating a different shade of guilt. Convulsions generally come on, accompanied with efforts to vomit. Those whose stomachs reject the dose at an early period, usually recover; on this occasion there were only two individuals with whom this was the case; the others were thrown, in a state of insensibility, into a hole, and every person present at the ceremony was obliged to throw a stone over them, so that their burial was quickly completed. The king's Skid was one of the first that fell. Those that recover are supposed to bear a charmed life ever after, and are respected as the peculiar favorites of the gods."

Fig. 1. Fruit.—*Natural size.*

2969.

[illegible] del.

Pub. by S. Curtis, Walworth, Feb. 1. 1830.

Swan Sc.

(2969)

HEDYCHIUM ACUMINATUM.

Class and Order.

MONANDRIA MONOGYNIA.

(Nat. Ord.—SCITAMINEÆ. *Br.*)

Generic Character.

Anthera duplex, stylum amplectens. *Filamentum* longum, gracile, antheram in apicem sustinens ligamento flexili dorso affixo. *Capsula* 3-locularis. *Semina* numerosa, arillata. *Rosc.*

Specific Character and Synonym.

HEDYCHIUM[*] *acuminatum;* spica laxa, bracteis unifloris, filamento labello breviore recurvato, labello ovato profunde bifido, segmentis acutis. *Rosc.*

HEDYCHIUM acuminatum. *Rosc. Scitam. cum Ic.*

DESCR. *Stem* three to five feet high. *Leaves* broadly lanceolate, with a very narrow, almost filiform point, obliquely veined from the mid-rib, glabrous above, beneath slightly silky; narrower and smaller upwards. *Spike* terminal, a span or more long in our specimen, with subdistichous, handsome, and fragrant *flowers*. *Bracteas* two or three, pale green, submembranaceous, and subdiaphanous, sheathing the lower half of the tube of the perianth. *Limb* of the *Cor.* in six, unequal segments: the outer ones linear, patent; of the three inner, two are linear, pale yellow, their margins revolute; the third is ovate, pure white, concave, tapering below into a narrow grooved base, the lamina deeply cut into two acute, oblong segments, which point forwards, and are generally serrated. *Filaments* red, grooved for the reception of the style. *Anther* oblong, two-celled; cells loaded with yellow pollen. From between the two cells of the anther, the *stigma* is a little protruded, it is capitate, and crowned with a tuft or fringe of upright hairs.

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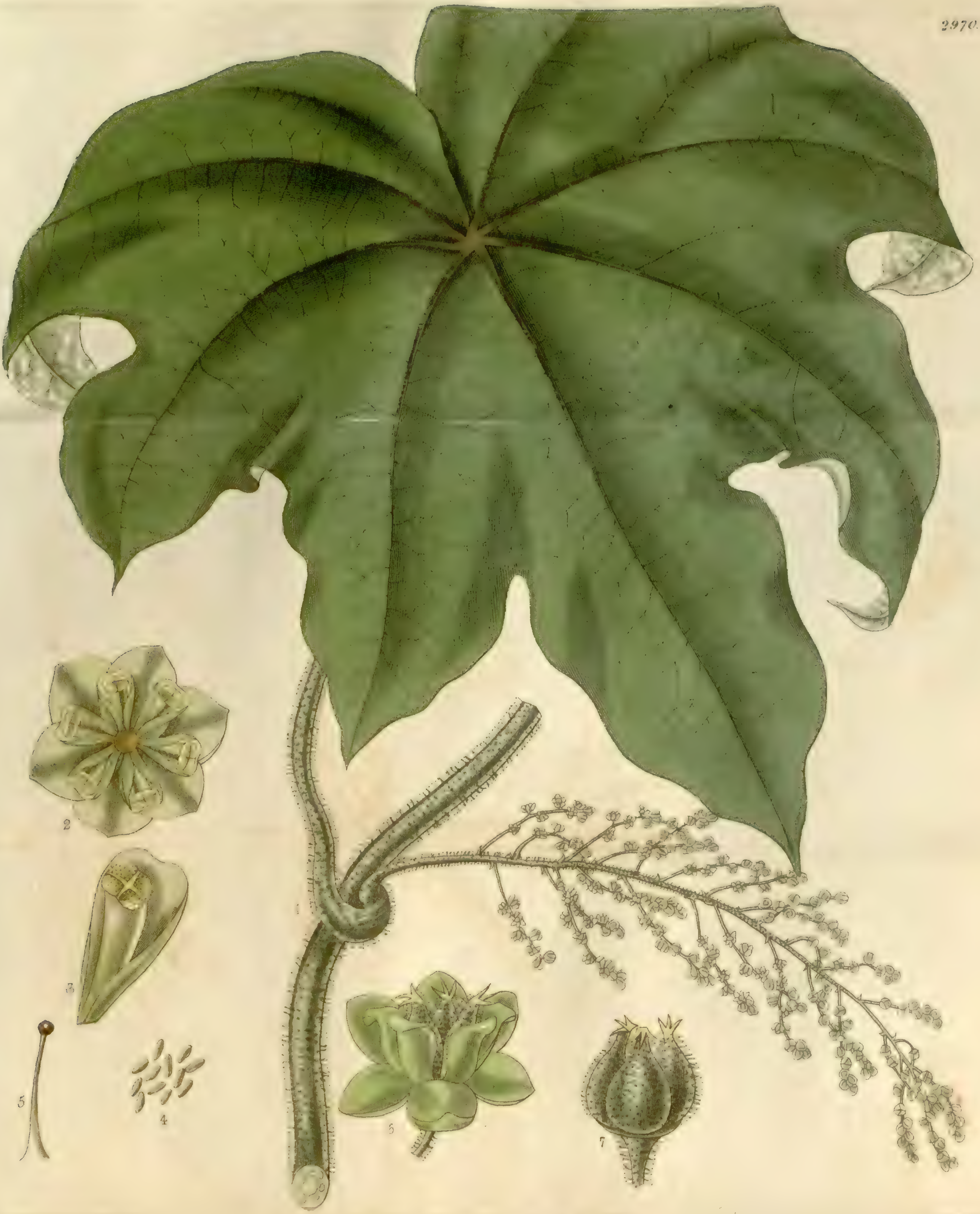
[*] From ηδυς *sweet* or *pleasing*, and χιων, *snow*: alluding to the fragrance, elegance, and whiteness of the flowers, at least of the first and original species. SMITH.

Introduced by Dr. WALLICH to our gardens, about the year 1820. It blossomed at Liverpool, in 1822, and was first described and figured in Mr. ROSCOE's work on the Scitamineous plants, which has thrown so much light on that most beautiful and intricate groupe of vegetables.

I am indebted for the specimen here figured, to my often-mentioned friend, Dr. GRAHAM, who received roots from the same liberal donor, and in whose collection they flowered in October, 1829.

Fig. 1. Stigma. 2. Anther, including a portion of the Style and Stigma.—*Magnified.*

2970.



Mrs. C. Telfair & Prof. Bojer del.

Pub. by S. Curtis Walworth. Mar. 1 1830.

Swan

(2970 2971)

COCCULUS PALMATUS. COLUMBO PLANT.

Class and Order.

DIŒCIA HEXANDRIA.

(Nat. Ord.—MENISPERMEÆ. *Juss.*)

Generic Character.

Sepala et *Petala* ordine ternario, bi- rarissime triserialia. *Stam.* 6, libera, petalis opposita. *Carpella* 3—6. *Drupæ* baccatæ, 1—6, sæpius obliquæ, reniformes, subcompressæ, monospermæ. *Cotyledones* distantes. *De Cand.*

Specific Character and Synonyms.

COCCULUS[*] *palmatus;* foliis basi cordatis palmatim 5—7 fidis subpilosis lobis acuminatis integerrimis, caule germinibusque piloso-glandulosis.
COCCULUS palmatus. *De Cand. Syst. Veget. v.* 1. *p.* 523. *Ejusd. Prodr. v.* 1. *p.* 98.
MENISPERMUM palmatum. *Lam. Dict. v.* 4. *p.* 99. *Willd. Sp. Pl. v.* 4. *p.* 825. *Spreng. Syst. Veget. v.* 2. *p.* 154. *Berry in As. Res. (ed. 8vo.) v.* 10. *p.* 385.

DESCR. *Root* perennial, composed of a number of fasciculated, fusiform, somewhat branched, fleshy, curved, and descending *tubers,* of the thickness of an infant's arm, clothed with a thin, brown epidermis, marked, towards the upper part especially, with transverse warts; internally they consist of a deep yellow, scentless, very bitter flesh, filled with numerous parallel, longitudinal fibres or vessels. *Stems* annual, herbaceous, one or two proceeding from the same root, about the thickness of the little finger, twining, simple in the male plant, branched in the female, rounded, green; in the full-grown plant, below, thickly clothed with succulent longitudinal hairs, which are tipped with a gland. *Leaves* alternate, the younger ones thin, pellucid, bright green, generally three-lobed, upwards gradually more numerous; older ones remote, a span in breadth, nearly orbicular in their circumscription, deeply cordate, five to seven-lobed, the lobes entire, often deflexed, wavy on the surface and margin, dark green above, paler beneath, hairy on both sides; the nerves, according to the number of lobes, are three, seven, or nine, pale, connected by veins which, in themselves, are reticulated, prominent beneath. *Petiole* about as long as the leaf, rounded, glanduloso-pilose, thickened below.

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[*] From the Greek κοκκος, a name given to the kermes of the Oak, which the fruit of the original COCCULUS somewhat resembled.

MALE PLANT. *Racemes* axillary, solitary or two together, drooping, about as long as the petiole, compound, branches an inch or more long, clothed with glandular hairs, slender, having at the base small deciduous *bracteæ*. *Cal.* glabrous, consisting of six leaves or sepals, which are nearly equal, arranged in a double series, oval, acute. *Cor.* pale green, of six free *petals*, oblong, with involute margins and recurved apices, arranged round a central orbicular disc or gland, in a single series. *Stam.* six, opposite to the petals. *Filaments* thick, shorter than the petals, which embrace their somewhat attenuated bases. *Anthers* terminal, truncated, four-celled, the *cells* opening internally and filled with the yellow *pollen*, consisting of linear-oblong grains. In the FEMALE PLANT, the *racemes* are axillary, solitary, simple, patent, shorter than those of the male. *Pedicels* with caducous, minute *bracteæ*. *Sepals* six, in two series, three inferior smaller, ovate, acute, subpatent, plane, glabrous. *Petals* six, rarely eight, free, shorter than the germens, recurved at the extremity, green, glabrous. *Pistils* three, free, of which two are generally abortive, ovate, acuminate, glanduloso-pilose, containing one *ovule*: *Style* almost none: *Stigma* with several spreading points. *Fruit* drupaceous or berried, about the size of a hazel nut, densely clothed with long, spreading hairs, which at the extremity are tipped with a black gland, oblongo-globose. *Seed* subreniform, clothed with a thin black shell, transversely striated. BOJER'S MSS.

COLUMBO of the *Materia Medica*, is the root of a plant which appears to have been long known in some parts of the East Indies, but whose native country and history have been, till very lately, involved in obscurity. Some have asserted, (see Rees's Cyclopædia, art. *Columbo,*) that the root was introduced from Columbo in Ceylon, to the continent of India, and thence derived its name. If such were the case, Ceylon was not considered, by the learned in India, to be the native country of this plant; for the Asiatic Society of Bengal, in the sixth vol. of their Transactions, published at the commencement of the present century, gave a "list of such Oriental subjects as required further illustration;" and amongst them particularly invited communications respecting the *Columbo Plant,* with a view to ascertain from what country the root so called was originally procured, and to obtain a botanical description and figure.

Commerson, indeed, whilst residing in the Isle of France, gathered there, in the garden of M. Poivre,* about the year 1770, some flowering specimens of a plant which came to France with the rest of that celebrated botanist's collection, and were marked in his Herbarium "*Calumbo in Indiis vocatur;*" and these were first described by Lamarck, under the name of Menispermum *palmatum.* That author further observes: "Il paroit qu'elle est originaire de l'Inde," and "C'est peut-être de ce *Menisperme* qu'on obtient cette racine qu'on nous rapporte de l'Inde sous le nom de *racine de Calumbo* ou Columbo, en morceaux jaunâtres, d'une saveur amère." From no other source do we derive any indication of the plant being known in a living state about that period; and *that* in the Isle of France probably soon perished.

About eight or ten years after the invitation was given on the part of the Asiatic Society, for information respecting the Columbo plant, (namely, in the tenth volume of the Asiatic Researches, 8vo. edition, published in London, 1811,) we find a figure and description of the male plant, and some important contributions to its history, by Dr. Andrew Berry, Member of the Medical Board of Fort St. George. From that gentleman we learn that this plant is never *cultivated* in its native country, but that it grows naturally and in abundance in the thick forests that are said to cover the shores about Oïbo and Mozambique, on the East coast of Africa, and inland for about fifteen or twenty miles. The roots are dug up in the month of March, the dry season, or when the natives are not employed in agriculture. The main stock of the root is not removed, but offsets from the base are taken, and those of sufficient size: yet not so old as to be full of fibres, which render it unfit for commerce.

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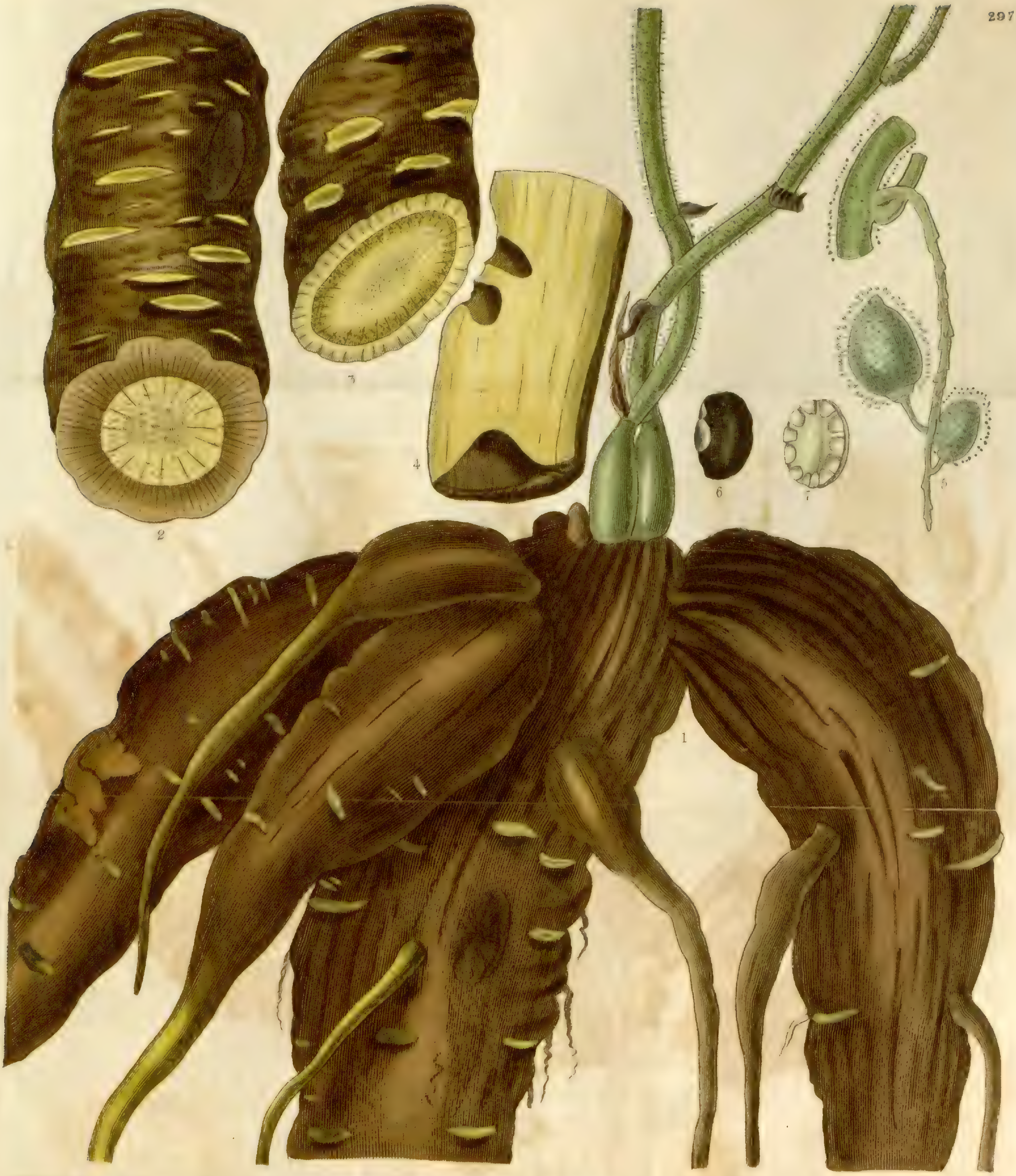
* See Lamarck's Cycl. v. 4. p. 99.

Soon after it is dug up, the root is cut into slices, strung on cords, and hung up to dry in the shade. It is deemed fit for commerce, when, on exposure to the sun, it breaks short; and of a bad quality when it is soft or black. It is held in high esteem among the natives, even those who reside at a great distance from Mozambique, for the cure of dysentery, which is frequent among them; for healing ulcers, and as a remedy for almost every disorder.

Dr. BERRY obtained this information from Monsieur FORTIN, who, when at Mozambique, and engaged in purchasing the dried root, as an article of trade, procured an entire living offset of a larger size than usual. This he brought with him to Madras, in September, 1805; and presented it to Dr. JAMES ANDERSON, the Physician General, who justly esteemed it a valuable acquisition to India. This being planted, produced a male plant, from which Dr. BERRY's figure and description were made. That gentleman was ignorant of the circumstance of LAMARCK having published it from dried specimens, as the MENISPERMUM *palmatum*, nor has he given it a scientific name; but he rightly judged it to belong to "the SARMENTACEÆ of LINNÆUS, the MENISPERMUM of JUSSIEU." Among the Africans its name is *Kalumb*. It is spelt *Kalumbo* by the Portuguese, in whose language the *o* is mute; and, from this, Dr. BERRY tells us, the name originated by which this valuable root is known to Europe. It is a staple export of the Portuguese from Mozambique; and, when we consider the quantity exported, it is certainly an extraordinary circumstance that the native country of the plant was not more generally known.

Still the female flower was a desideratum; and DE CANDOLLE, the last botanical author perhaps who has described the plant (apparently from COMMERSON's specimens in the Parisian Museum), was obliged to declare that he was ignorant of the structure of the female flowers and fruit.

For the means of making them known to the botanists of Europe, I am mainly indebted to the indefatigable exertions of my often-mentioned friend CHARLES TELFAIR, Esq. of the Mauritius. From that gentleman, through the hands of ROBERT BARCLAY, Esq., I have received no less than three atlas folio sheets of drawings, representing portions of this plant of the natural size, with admirable dissections, executed by Professor BOJER, aided in the colouring



Mrs C. Telfair & Prof. Bojer. delt.
Pub. by S. Curtis, Walworth, March 1 1830.
Swan Sc

by the faithful pencil of Mrs. CHARLES TELFAIR. Whatever is wanting, either of execution or accuracy in the accompanying figures, which were taken from these splendid delineations, must be attributed to my being obliged to reduce them to the humble standard of the Botanical Magazine. These drawings too were accompanied by a full description of the plant, from the pen of Professor BOJER, (and which I have here merely rendered from the Latin,) and by an account of the recent introduction of the plant to our colonies, from a MSS. memoir, by Mr. TELFAIR himself. Shortly previous to their arrival in England, living roots were sent by that gentleman to Mr. BARCLAY'S Botanical Garden and to that of Glasgow.

"The late Sir WALTER FARQUHAR, Physician to the King," says Mr. TELFAIR*, "was very anxious to introduce into England the *Colombo root* in a living state; and for that purpose, he desired his son, Sir ROBERT FARQUHAR, Governor of Mauritius, Bourbon, and their Dependencies, to procure the plant from its native soil in Africa, and forward it to London. Sir ROBERT lost no time, after assuming his government at the conquest of the French Islands, in applying to the Governor of Mozambique for growing plants; and was repeatedly assured that these should be sent to him at the proper season. These promises, however, were never fulfilled; although renewed by the several succeeding officials of the Portuguese possessions on the East coast of Africa, ever since the year 1811. Dr. WALLICH also took much pains for effecting the same object, and sent to Governor FARQUHAR the drawing made at Calcutta of a male plant of the *Colombo root*, which had been brought to the Botanic Garden there by Mr. BERRY. Copies of this drawing were distributed to the different ships of war and captains of merchant vessels, trading to the Eastern coast of Africa, that they might be enabled to distinguish the plant and bring it to the Mauritius; since there had been an evident unwillingness on the part of the Portuguese authorities to permit this precious vegetable to be taken away, in any other state than what it bears in commerce, when deprived of vegetative power by passing through the oven.

"All the attempts resulting from these means proved fruitless; until Captain WILLIAM FITZWILLIAM OWEN, commanding the surveying squadron of his Majesty's navy, on the East African coast, undertook the task. The extensive influence he had acquired by his intercourse with the native chieftains and tribes, enabled him to procure living plants; while his botanical knowledge secured him against the mistakes committed by others, who had been misled by the local settlers in their search, and imposed on by the substitution of other species instead of the true *Colombo root*. Captain Owen, in the year 1825, brought away in his Majesty's ship Leven, from Oïbo, a great number of cases, filled with growing roots of the male and female plants, laid down in the sandy loam, which appears to be their favorite soil. No time was lost by him in forwarding a great portion of these to Mr. Telfair, at Mauritius, planting some also at Mahé, in the Seychelles Archipelago, and sending to Bombay several cases, in order to multiply, by dispersion, the chances of success in naturalizing them in different climates.

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* This account appears to have been read at a literary and scientific Society in the Mauritius, of which Mr. TELFAIR is the Vice-president.

"The roots that were brought to Mauritius, were partly transmitted to England, New Holland, and America; but the greater number were distributed among the various districts of Mauritius and Bourbon. Many of these plants blossomed at Mauritius in the course of a year, but the flowers proved all male. The roots, however, had, during that period, multiplied to twenty or thirty times the original quantity, and thus an opportunity was given for distributing them still more extensively. The female plants flowered at Seychelles, and Mr. G. Harrison, the Government Agent there, transmitted some of their roots to Mr. Telfair, in whose garden of Bois Chéri, in the Mauritius, they have flowered, and being fecundated by Professor Bojer, who touched them with the pollen of the male blossom, they bore seeds. From these individuals the drawings by Professor Bojer have been taken, which give a delineation and dissection of every part.

"Some of the original roots imported by Captain Owen, and immediately planted, have however remained in the earth without making any shoot, though they possess vegetable life, entire and undecayed. When taken up and examined, they appear to be undergoing a process of cicatrization at the surface, where they have been broken off from the parent root; and it is not until this wound is completely healed and firm, that the powers of vegetation are directed to the production of a stalk and leaves and flowers. This process of cicatrization is extremely slow, thus offering an obstacle to the extensive propagation of this species by offsets from the root. But Professor

fessor **Bojer** is at present engaged in some experiments for increasing its productiveness, by laying down and planting the stem in cuttings, and hitherto with an appearance of success. The wound thus caused in the plant is much smaller, and seems to heal more readily. If this plan answers well, the culture of *Columbo root* may be so extended as to render it an object of industry and resource to the planters of the Mauritius.

" Mr. **Newman**, the Superintendent of the King's Botanical Garden of Mauritius, has prepared a tincture from a part of the roots in his possession, according to the formula of the London College of Physicians; but this tincture is much stronger than what comes from Apothecaries' Hall, and its taste has a more grateful and aromatic flavour."

Columbo root has been long known and esteemed, both in the East Indies and in Europe; where it is found to be of singular efficacy in strengthening the fibres of the stomach and bowels, not only in chronic cases, but in the cholera morbus, dysentery, and diseases of the alimentary canal. Its analysis, according to M. **Planche**, has afforded a third of its weight of woody tissue, a third of amylaceous matter, and the remaining third is principally composed of animal substance and a yellow and bitter matter, insoluble in metallic salts. " The presence of so large a quantity of amylaceous substance accounts" for the great reputation of the root in dysentery, diarrhœas, and excessive vomiting. By a *decoction* of Columbo, the fecula is extracted, as well as the bitter principle, whose action is thus considerably modified: whilst an infusion is simply bitter and tonic.

In the Dictionnaire des Drogues, by **Chevallier** and **Richard** (Paris, 1817), mention is made of a *bastard* or *false Columbo (faux Colombo)*, brought from the States of Barbary, but which may be detected at once on analysis, by the entire absence of fecula. It is not yet known of what plant this is the produce, but it is often substituted for the true Columbo, which it has thus sometimes unjustly brought into disrepute.

Tab. 2970. Fig. 1. Portion of a Male Plant, reduced to two-thirds of its natural size. 2. Male Flower. 3. Stamen and Petal. 4. Grains of Pollen. 5. Glandular Hair. 6. Female Flower. 7. Pistils, of which two are frequently abortive.—All but fig. 1. more or less *magnified*.

Tab. 2971. Fig. 1. Root, with a portion of two young stems, rather less than the size of nature. 2, 3, 4. Different sections of the Root, showing its internal colour and appearance. 5. Portion of a Female Raceme, with perfect Fruit. 6. Seed. 7. Embryo.—*Magnified*.

W. J. H. del^t.

Pub. by S. Curtis Walworth Mar. 1.1830.

Swan sc.

(2972)

DRYAS DRUMMONDII. YELLOW-FLOWERED MOUNTAIN AVENS.

* * *

Class and Order.

ICOSANDRIA MONOGYNIA.

(Nat. Ord. — ROSACEÆ.)

Generic Character.

Cal. 8—9 partitus. *Pet.* 8—9. *Caryopsides* plurimæ, stylis plumosis coronatæ. *Spr.*

Specific Character and Synonyms.

DRYAS* *Drummondii;* foliis ellipticis basi subattenuatis inciso-crenatis subtus scapoque niveo-tomentosis, calycis segmentis ovatis (petalis luteis).
DRYAS Drummondii. *Richardson's MSS.*
DRYAS chamædrifolia. *Richards. in Frankl. Journ. App. p.* 740. *(nec aliorum).*

DESCR. *Stems* short, woody, simple or divided, the lower part rough with the remains of the old leaf-stalks and stipules, above principally leafy. *Leaves* petioled, coriaceous, elliptical, more rarely obovate, inciso-crenate, the margin slightly revolute, the base acute or somewhat attenuated, and there often more deeply crenate, dark green above, with a distinct mid-rib, and deep lateral veins, which, if traced carefully, will be found each to be directed to the marginal teeth; beneath, covered with a down of the most beautiful snowy whiteness, so as entirely to conceal the veins, and in a great measure the mid-rib. *Petioles* as

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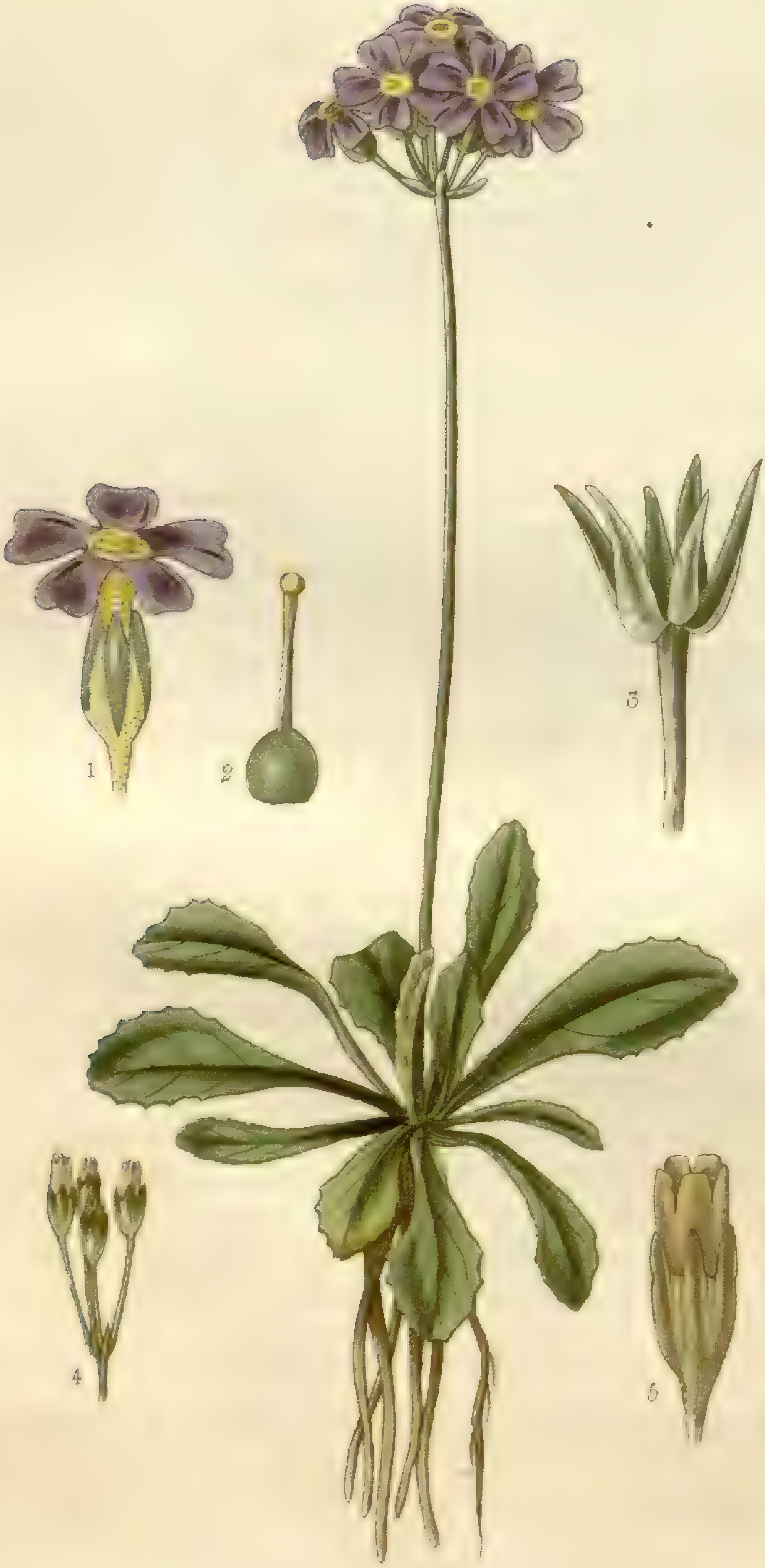
* From δρυς, *an oak*, owing to a fancied similarity between the foliage of that tree, and of *Dryas.*

long as, or longer than the leaves, reddish, slightly downy, with a pair of subulate stipules at the base. *Scape* terminal, solitary, three to four inches high, much lengthened in fruit, bearing generally a small subulate *bractea*, and clothed with the same almost dazzling white down as the underside of the leaves, and terminated by a single large flower. *Calyx* of seven to nine deep, ovate, somewhat membranaceous segments; on the back, but not at the margins, densely covered with coarse, purple, glandular, and viscid hairs; within, at the base, silky. *Petals* equal in number with the calycine segments, broadly elliptical, with a short claw, obscurely veined, yellow. *Filaments, Germen,* and *Styles,* hairy. *Caryopsides* narrow, obovate, terminated by the very elongated, feathery *style* or awn. *Stigma* a little incrassated.

This beautiful species of DRYAS was discovered by Dr. RICHARDSON, during Sir JOHN FRANKLIN's first journey in the woody country of North America, between lat. 54° and 64°; but the fruit only having been seen, it was considered to be the same as the D. *octopetala,* (*chamædrifolia* of PURSH,) and as such is mentioned in the Botanical Appendix to FRANKLIN's Journal. On the second expedition it was found both by Dr. RICHARDSON and Mr. DRUMMOND in flower, and in great perfection, upon gravelly parts of rivers in the Rocky Mountains, and about Slave Lake, and showed itself, in the colour of the flower, the shape of the calycine segments and foliage, and the remarkable snowy whiteness of the down, to be quite distinct both from D. *octopetala* and D. *integrifolia.* It has been Dr. RICHARDSON's wish that it should bear the name of the indefatigable and meritorious Assistant Naturalist of the expedition, Mr. THOMAS DRUMMOND. Seeds were brought over to this country, which have vegetated, and the plants are flourishing in several gardens, though they have not yet blossomed. Our drawing, therefore, has been in part taken from the cultivated plant, and in part from well dried specimens.

Fig. 1. Petal. 2. Stamens. 3. Pistil. 4. Caryopsis.—*Magnified.*



W. J. H. delt. Pub. by S. Curtis, Walworth, Mar. 1 1830. Swan Sc.

PRIMULA MISTASSINICA. LESSER AMERICAN BIRD'S-EYE PRIMROSE.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—PRIMULACEÆ. *Juss.*)

Generic Character.

Flores subumbellati, involucrati. *Cal.* tubulosus, 5-fidus s. 5-dentatus, persistens. *Cor.* tubulosa, fauce vel nuda vel glandulosa, limbo 5-lobo. *Caps.* apice 10-dentata, polysperma. *Spr.*

Specific Character and Synonyms.

PRIMULA* *mistassinica ;* foliis obovato-spathulatis dentatis subtus scapo calyceque farinosis, involucri foliolis basi gibbosis, corollæ laciniis subcuneatis emarginatis tubo subdimidio brevioribus.

PRIMULA mistassinica. *Mich. Fl. Bor. Am. v.* 1. *p.* 124. *Pursh, Fl. Am. Sept. v.* 1. *p.* 137. *Lehm. Prim. p.* 63. *t.* 7. *Spreng. Syst. Veget. v.* 1. *p.* 576. *Cham. et Schlecht. in Linnæa, v.* 1. *p.* 213.

PRIMULA pusilla. *Goldie in Edin. Phil. Journ. v.* 6. *p.* 322, *t.* 11. *f.* 22. *Hook. Exot. Fl. v.* 1. *t.* 68. *Richardson in Frankl. Journ. ed* 2. *p.* 21. *Spreng. Syst. Veget. v.* 2. *p.* 575. *Sweet, Brit. Fl. Gard.* 2d *Ser. t.* 5.

DESCR. *Root* perennial, fibrous. *Leaves* spreading, one to two, or two and a half inches long, obovato-spathulate, tapering into a *foot-stalk,* the broad part irregularly toothed,

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* So called from its early appearance in the Spring.

pale-green above, and naked beneath, but, especially in the younger leaves, mealy; for the mealiness generally disappears in the old leaves. *Scape* varying much in length, from two to four or six inches, naked above, mealy. *Umbel* of from two to eight or ten flowers. *Leaves* of the *involucre* broadly subulate, gibbous below, mealy, as are the pedicels. *Calyx* ovato-cylindrical, with five blunt teeth, and as many ribs, mealy between the ribs. *Tube* of the corolla yellow, not much exceeding the calyx, the limb of five, spreading, almost cuneate and emarginate segments, the mouth yellow, with five short, yellow glands. *Stamens* included. *Germen* globose, green. *Style* rather shorter than the tube of the corolla, green. *Stigma* globose, yellow. *Capsule* cylindrical, half as long again as the calyx, bursting with retuse, upright teeth.

When I published the present species under the name of P. *pusilla,* I was doubtful whether it might not be the P. *mistassinica* of MICHAUX, a species, indeed, very cursorily described by that author, and figured with ripe fruit only by the excellent LEHMAN. Now that I possess fructified specimens, I find them very nearly indeed to resemble LEHMAN's figure; and it is certainly the species which CHAMISSO gathered for the true *mistassinica,* and has described as such, as I have ascertained by a comparison with individuals received from him. It is nearly allied to P. *farinosa* and P. *scotica,* differing from both in the more spathulate and less mealy leaves. The leaves of the involucre I find to be nearly the same in all three.

P. *mistassinica* inhabits North America from Canada as high as the Arctic Circle, and across to the North Western shores of that vast continent. Seeds have been distributed by Dr. RICHARDSON and Mr. DRUMMOND on their return from the second Land Arctic Expedition, and the plant is now in Mr. NIELL's, and the Botanical Gardens of Edinburgh and Glasgow, and doubtless in many other collections. It flowered in July.

Fig. 1. Flower. 2. Pistil. 3. Involucre. 4. Capsule. 5. Single Capsule.—All but fig. 4 more or less *Magnified.*

2974.

[illegible]
Pub by S Curtis, Walworth Mar. 1. 1830.
Swan Sc

CESTRUM BRACTEATUM. BRACTEATED CESTRUM.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—SOLANEÆ.)

Generic Character.

Cal. tubuloso-campanulatus, 5-dentatus. *Cor.* infundibuliformis, limbo plicato, 5-fido. *Stam.* tubo inserta, subdenticulata. *Bacca* 1-locularis, polysperma.

Specific Character and Synonym.

CESTRUM *bracteatum ;* filamentis basi barbatis, foliis lanceolatis undatis pubescentibus, stipulis oblique cordato-reniformibus, bracteis spathaceis, floribus fasciculatis.
CESTRUM bracteatum. *Link.*

DESCR. *Stem* woody, rough. *Branches* covered with dense, greenish tomentum, which withers and remains long attached. *Leaves* scattered, light-green, stalked, spreading, lanceolate, strongly veined, waved or crisped, covered with harsh pubescence on both sides, the middle rib and veins projecting much on the under-side, the former above also. *Petiole* erect, grooved above, pubescent, purple before fading, about a sixth of the length of the leaf. *Stipules* geminate, varying in size, the largest upwards, broadly falcate or kidney-shaped, horizontal and bending round the branch, more glabrous than the leaves. *Peduncles* about an inch long, axillary and terminal, generally about twice as long as the petioles, slightly flattened and dilated towards the flowers, nodding. *Pedicels* very short, stout, straight, slightly pubescent. *Flowers* fascicled, of a uniform pale yellow. *Bracteæ* single at the base of each flower, with the exception of the central one, spatha-like, appressed, acuminate, and coloured like the flower, pubescent. *Cal.* about as long as the pedicel, pubescent within and without, nearly cylindrical, with five strongly projecting ribs on the outside, leading to five slightly connivent acute teeth. *Corolla* inferior, hypocrateriform, pubescent without, smooth within; tube nearly an inch long, dilated a little upwards, and contracted at the throat: *limb* five-cleft, segments ovate, acute, spreading at right angles to the tube, each with two strong ribs projecting behind. *Stamens,* five: *filaments* inserted immediately above the middle of the tube, each having a tuft of matted hairs projecting from the inside at their base, above this straight and smooth, nearly reaching to the faux. *Anthers* bilobular, short, connivent, bursting laterally: *pollen* yellowish-white. *Stigma* sap-green, nearly round, but flattened a little at the top, raised above the anthers, and projected into the faux. *Style* three-quarters of an inch long, nearly colourless, filiform. *Germen* roundish or obovate, smooth, yellowish-green, obscurely furrowed, seated on a small yellow disk. *Ovules* numerous, obovate. GRAHAM.

This plant was received by Dr. GRAHAM, under the name here adopted, from the Botanic Garden of Berlin, in June, 1828; but from what country was not stated, probably Brazil. It blossomed in the stove of the Edinburgh Botanic Garden, in December, 1829. There was a succession of flowers which continued to expand for a length of time, and were rather ornamental.

Fig. 1. Flower and Bractea. 2. Stamen. 3. Pistil. 4. Calyx. 5. Pistil, with its Gland at the base.—*Magnified.*

W.J.H del^t. Pub. by S. Curtis Walworth Mar. 1. 1830. Swan sc.

VERONICA ALPINA, *var.* WORMSKIOLDII.
ALPINE SPEEDWELL, WORMSKIOLD'S *var.*

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Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—SCROPHULARINEÆ.)

Generic Character.

Cor. 4-fida, rotata, lacinia infima angustiore. *Caps.* 2-locularis, apice emarginata.

Specific Character and Synonyms.

VERONICA* *alpina;* racemo, terminali dense corymboso, foliis ovato-ellipticis serratis, calyce bracteisque ciliatis, capsula obovata emarginata stylo $\frac{1}{3}$ longiore.

VERONICA alpina. *Linn. Sp. Pl. p.* 15. *Willd. Sp. Pl. v.* 1. *p.* 63. *Engl. Bot. t.* 484. *Fl. Dan. t.* 16. *Spreng. Syst. Veget. v.* 1. *p.* 72.

Var. *Wormskioldii,* elatior, simplex, foliis multo majoribus, calyce capsulaque glanduloso-hirsutissimis. V. alpina, *var.* Unalaschkensis. *Cham. et Schlecht. in Linnæa, v.* 2. *p.* 556. V. alpina, *var.? Fl. Dan. t.* 1961. V. Wormskioldii, *Roem. et Sch. v.* 1. *p.* 101. *Spreng. Syst. Veget. v.* 1. *p.* 72.

DESCR. (Of var. *Wormskioldii*). *Root* (apparently) annual or biennial, small, throwing out few fibres. *Stem* a span high, quite simple in our specimens, declined at the base, there erect, rigid, stout, terete, downy. *Leaves* opposite, almost exactly ovate, sessile, obtuse, dark-green, obscurely serrated, glabrous; the upper and smaller ones

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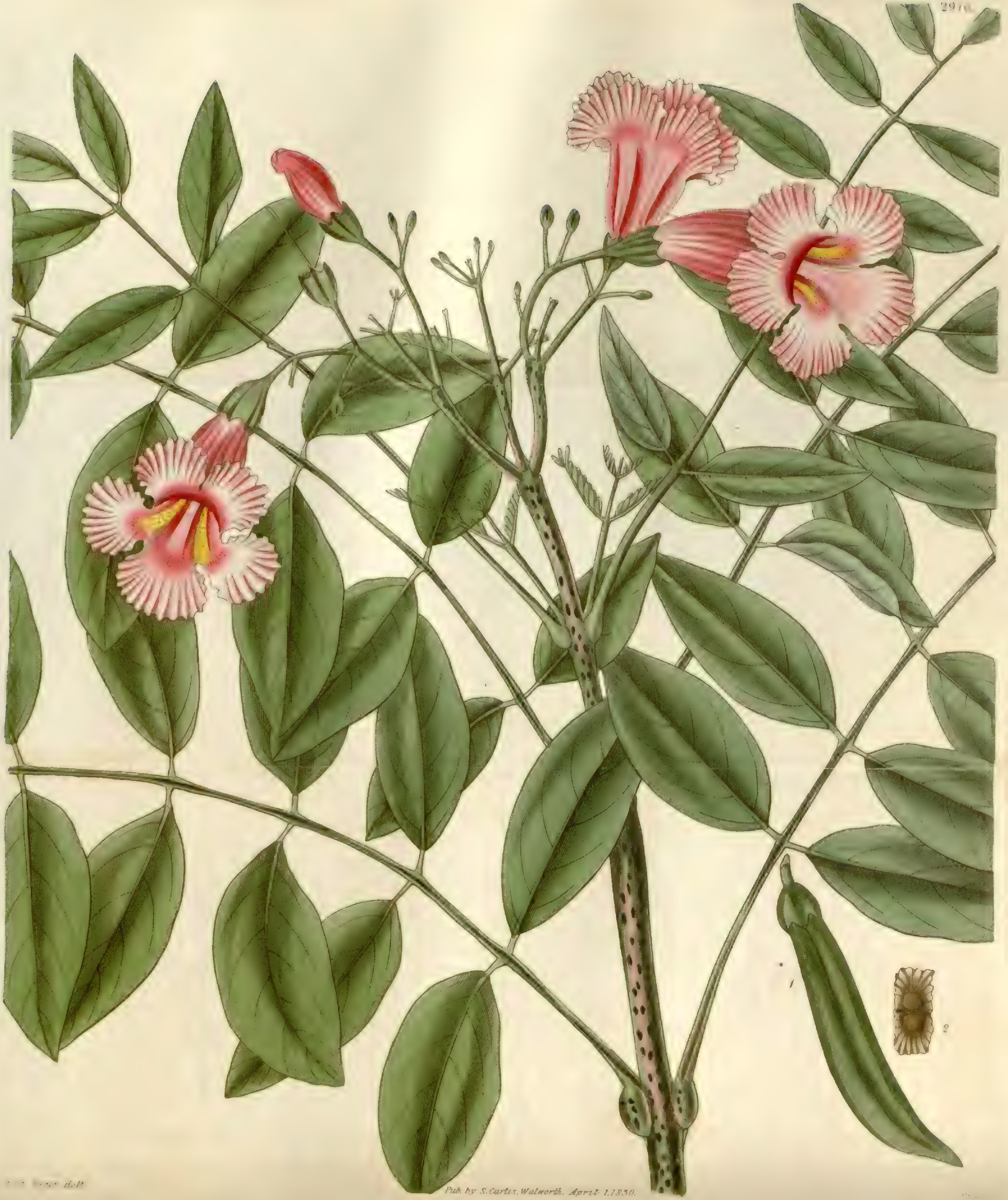
* A name of dubious origin.

alone very slightly hairy, and principally at the margin and base. *Flowers* upon the leafless extremity of the stem, thus as it were peduncled, in a compact corymb, which eventually lengthens out into a short, fructified spike or raceme. *Bracteæ* linear, subulate, nearly as long as the flower. *Calyx* deeply four-partite; its *segments* lanceolate, and as well as the bracteæ, short pedicels and peduncle, clothed with purple hairs, which are often terminated by glands. *Corolla* with a rather long and broad tube, so as to be almost funnel-shaped, nearly white: *limb* of four spreading, purplish-blue, obtuse segments, marked with deeper veins. *Stamens* two. *Anthers* blue. *Capsule* oblongo-obcordate, thickly clothed with purple hairs, which are mostly, not always, glandular, and tipped with the capitate *style,* which is about one third of its length.

At the first aspect of the VERONICA here figured, there are few Botanists, I believe, who would think of referring it to the rare but humble V. *alpina* of our Scottish mountains, nor was it till after a careful comparison of many specimens in company with my friend Dr. GRAHAM, that I could be satisfied of its identity. I have long known the plant as a native of Greenland; especially from specimens that have been communicated to me at various times, by Professor HORNEMAN of Copenhagen, who though aware of its being the *Wormskioldii* of ROEMER and SCHULTES, yet hesitated about considering it a species. CHAMISSO met with it at Unalaschka, and described it as his var. *Unalaschkensis* of A. *alpina.* Mr. DRUMMOND gathered it in considerable plenty on moist alpine prairies on the Rocky Mountains, and from his seeds, plants have been raised both in the Edinburgh and Glasgow Botanic Gardens. The drawing here given was made by Mr. JAMES MACNAB. I possess the same plant from Labrador, gathered by the late Mr. MORRISON.

Fig. 1. Corolla. 2. Fruit.—*Magnified.*

2976



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Pub. by S. Curtis, Walworth. April 1. 1830.

BIGNONIA TELFAIRIÆ. MRS. TELFAIR'S BIGNONIA.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—BIGNONIACEÆ.)

Generic Character.

Cal. campanulatus, integerrimus, repandus vel subdentatus. *Cor.* campanulata, limbo bilabiato, 5-lobo. *Filamentum* 5 sterile. *Stigma* bilamellatum. *Capsula* siliquæformis, bilocularis, dissepimento valvis parallelo. *Semina* transversa, biseriata, membranaceo-alata. *Spr.*

Specific Character and Synonym.

BIGNONIA* *Telfairiæ;* arborea, foliis oppositis pinnatis 6—9 jugis cum impari, foliolis ovato-oblongis acuminatis lucidis, panicula terminali laxa, siliquis teretibus acuminatis carnosis, seminibus lato-alatis. *Bojer MSS.*

BIGNONIA Telfairiæ. *Bojer MSS.*

DESCR. A densely leafy *tree,* having an erect *trunk,* from fifteen to twenty feet high, clothed with a smooth greyish bark. *Branches* below alternate, horizontal, rounded, whitish; upper ones patent, subcompressed, mostly opposite, thickened at the joints, green, glabrous, spotted with white. *Leaves* opposite, pinnated, of from six to nine pairs of pinnæ, with a terminal, odd leaflet; the lower ones very patent, even recurved; upper ones nearly erect: *Pinnæ* or leaflets, opposite, ovato-oblong, acuminate, entire, on very short petioles, patent, coriaceous, dark green, shining above and somewhat viscid, paler beneath, the nerves prominent on both sides. *Rachis* or main-stalk grooved above, remarkably swollen at the base, where it is distinctly jointed upon the stem or branch, and jointed also at the insertion of the leaflets. *Panicles* terminal, its *peduncles* opposite or whorled, spreading. *Flowers* horizontal or drooping, large, of a most delicate rose colour. *Calyx* bell-shaped, somewhat inflated, with short, acute teeth, green tinged with purple, persistent. *Tube* of the *corolla* an inch and a half long, inflated upwards, contracted at the base, with deeper rose-coloured striæ and plaited, glabrous; *limb* 5-fid, the lobes spreading, unequal, the lower one the largest, all of them rounded and crenato-fimbriated at the margin within; the corolla has three longitudinal, yellow stripes on the lower side. *Stamens* inserted at the base of the corolla: *filaments* curved: *anthers* yellow. *Germen* pyramidal, glabrous: *Style* filiform, longer than the tube: *Stigma* two-lobed. *Fruit* or *siliqua* three inches long, rounded, fleshy, acuminate, of two valves, many-seeded: *Dissepiment* spongy, bearing many *seeds,* which are surrounded by a thin and broad pellucid membrane. *Bojer.*

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* In honor of the Abbé JOHN PAUL BIGNON, a friend of TOURNEFORT, who dedicated it to him.

This charming BIGNONIA is a native of temperate and mountainous regions, in the island of Madagascar, and in the province of Angove, where it flowers from February to April, and is known to the inhabitants by the name of *Vooa Kidzi-Kidzi-Ka.* During the six years that Professor BOJER devoted to the investigation of the Botanical riches of Madagascar and the neighbouring islands and continent of Africa, no plant possessed greater charms, in his estimation, than the subject now before us. The inhabitants too, of the Province of Emirna particularly, cultivate it with great ardour, and to a considerable extent, no less on account of the beauty of its blossoms, than for the sake of its fleshy fruit, which has a very agreeable flavour, and is highly prized as an esculent. It is no wonder, then, that M. BOJER has selected this individual to bear the name of Mrs. CHARLES TELFAIR of the Mauritius, in testimony of his high respect for her many virtues and accomplishments, and in acknowledgment of the services rendered by her to Botany in many ways, but in none more than by her happy talent in the delineation of plants.

For the drawing here represented, made on the spot and from native specimens, and for the whole of the above description, I am indebted to Professor BOJER. I am not aware that the plant, so truly deserving of cultivation with us, has yet been introduced to our gardens. But of this we are sure, that if it be in the power of Mr. TELFAIR or M. BOJER, to transmit living plants or seeds, it will be done.

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[*] I have erred in my account of BIGNONIA *Colei,* t. 2817, in saying it was discovered by Prof. BOJER. It was found in the forests first by his Excellency Sir G. LOWRY COLE himself, who indicated the station to M. BOJER.

Fig. 1. Fruit, *nat. size.* 2. Seed, ditto.

2977

W.J.H. del.

Pub. by S. Curtis Walworth April 1. 1830.

Swan sc.

GILIA PUNGENS. SHARP-LEAVED GILIA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—POLEMONIACEÆ.)

Generic Character.

Cal. campanulatus, 5-fidus. *Cor.* infundibuliformis vel hypocrateriformis, quinquefida. *Stam.* fauci inserta. *Stigma* trifidum. *Capsula* trilocularis, 3-valvis, loculis mono-di- polyspermis.

Specific Character and Synonym.

GILIA *pungens;* pubescenti-glandulosa, foliis bracteisque pinnatifidis, laciniis incisis subulatis pungentibus, floribus glomeratis.
GILIA pungens. *Douglas MSS.*

DESCR. Annual. *Stem* much branched, somewhat angular, zigzag, clothed, as are the leaves and calyces, with glandular, viscid hairs, emitting a powerful and disagreeable smell, which induced its discoverer at one time to name the species *fœtida,* and which he compares to that of DIOSMA *pulchella.* *Leaves* few, mostly at the forking of the branches, an inch and a half to two inches long, deeply pinnatifid, with laciniated segments, all of which are sharply acuminated and pungent. *Flowers* collected into rather large, dense glomeruli or heads, sessile or peduncled, having beneath them patent bracteæ, resembling the leaves, except that they are smaller; the inner ones of the head gradually become more simple. *Calyx* almost funnel-shaped, longer than the corolla, cleft nearly to the base into five, subulate, dark green, viscid segments. *Corolla* hypocrateriform: the *tube,* however, a little swelling upwards, glabrous, almost white; the *limb* spreading, of five, ovate, pale blue (sometimes white, according to Mr. Douglas) segments. *Stamens* inserted above the middle of the tube, and entirely included. *Anthers* broadly oval, two-lobed. *Pistil: Germen* oval, green, evidently containing many ovules; *Style* filiform, white, scarcely so long as the tube; *Stigmas* three, slender, linear, recurved, downy.

Communicated by the Horticultural Society of London, by whom it was raised from seeds brought by Mr. David Douglas. He discovered this curious plant on moist ground in mountain valleys, near the sources of the Multnomack river, one of the Southern branches of the Columbia, in North West America. It flowers in England in the open border, during the month of July.

Fig. 1. Flower. 2. Stamen. 3. Pistil.—*Magnified.*

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W J H del

Pub by S. Curtis, Walworth, April 1.1850.

GONGORA VIRIDI-PURPUREA. GREENISH-PURPLE GONGORA.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Petala 3 exteriora patentissima, 2 interiora minora. *Columna* elongata. *Labellum* pedicellatum, varie appendiculatum. *Massæ Pollinis* duæ, pedicellatæ.

Specific Name.

GONGORA* *viridi-purpurea;* petalis insertione subæqualibus, labello longe pedicellato elongato basi bipartito, laciniis subulatis.

DESCR. Parasitic. *Bulbs* oblong, somewhat clustered, and partially clothed with a lacerated, membranous coat; bearing at the extremity a lanceolate, acuminated *leaf*, attenuated at the base, having three principal, and several less evident, parallel longitudinal nerves. *Scapes* three or four, a span long, terete, green, slender, arising from the base of the bulbs, and, in the cultivated state at least, pendent, hanging down over the side of the pot in which it is planted: these scapes bear a raceme of several flowers at the extremity: each flower having at its base a small, deciduous *bractea*. Three *outer Petals* lanceolate, upper (or that which is usually the upper one, but here the lowest)

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* So named in honor of ANTONIO CABALLERO Y GONGORA, Bishop of Cordova, who encouraged the botanical researches of the celebrated MUTIS, in South America.

lowest) reflexed or even revolute, two lateral ones very patent, all of them greenish without, spotted with deep purple within : two inner ones dingy purple, narrow, lanceolate, with a rather curved claw, at length patent. *Lip* ascending, linear-lanceolate, thick and fleshy, attenuated at its upper extremity, and obliquely notched, the lower half bipartite, the segments subulate, pointing towards the centre of the flower; *stipes* or peduncle inserted at the back of the lip, curved, slender. *Column* club-shaped, a little curved, so that its summit meets the centre of the upper side of the lip, purple. *Anther-case* oblongo-hemisphærical, obscurely two-celled, attached to the back of the top of the column by a slender ligament, and by means of which, after the anther is separated from the top of the stigma, it is often suspended. *Pollen* of two pale-yellow, oblong *masses*, attenuated at the base, where they are attached to a short, deep-yellow stalk, at the base of which is a flat, waxy *gland*.

Communicated with a drawing from the rich collection of Aigburgh, by the kindness of Mrs. ARNOLD HARRISON. It was gathered in woods, above Botafogo Bay, Brazil, by the brother of that lady, HENRY HARRISON, Esq. It flowered in June, 1829.

Whatever opinion may be entertained concerning the Genus of GONGORA *speciosa* of this work, t. 2755, there can be none respecting this plant, which in the general structure of its flowers exhibits the greatest similarity with those of RUIZ and PAVON'S GONGORA, and with the G. *atropurpurea*, figured in Exotic Flora, tab. 178. The general appearance of the CYMBIDIUM *dependens*, Bot. Cab. t. 936, is very similar to this plant ; but there, the colour of the centre of the flower especially, is widely different, and of its structure I have no means of judging. It is, however, considered to be a native of China.

A. Plant, from which the pendent Scape, *B*, has been removed. Fig. 1. Back view of a Flower, and 2, Side view of ditto. 3. Flower from which the three outer Petals have been removed. 4. Column and Lip. 5. Column. 6. Back view of an Anther-Case. 7. Internal view of ditto. 8. Pollen Mass. 9. Summit of the Column, from which the Anther has fallen.—*Magnified*.

2979.

W.J.H. delt   Pub. by S. Curtis, Walworth, April 1.1830   Swan Sc.

POLEMONIUM PULCHERRIMUM. BRIGHT-FLOWERED JACOB'S LADDER.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—POLEMONIACEÆ.)

Generic Character.

Calyx campanulatus, 5-fidus. *Cor.* rotata. *Filamenta* basi dilatata, pilosa. *Capsula* subrotunda, 3-locularis, polysperma.

Specific Character.

POLEMONIUM * *pulcherrimum ;* caulibus pluribus adscendentibus foliosis calyceque pubescentibus, foliolis ovatis glabris, paniculis subcorymbosis, corollæ segmentis ovalibus subacutis.

DESCR. *Root* perennial, slender, subfusiform, much attenuated, throwing out many fibres and entering deep into the earth. *Stems* scarcely a span high, several from the same root, at the base more or less decumbent, then erect, herbaceous, downy, branched upwards, bearing few leaves. *Leaves,* with a faint smell of musk, mostly radical, spreading, pinnated, with several small, mostly alternate, rather distant, ovate, obtuse, entire *leaflets,* which are quite glabrous: the *rachis* a little downy, especially near the base: upper leaves gradually smaller, and with fewer leaflets. *Flowers* in small, terminal *corymbs,* drooping before expansion, then erect. *Calyx* campanulate, with five broad segments or teeth, downy. *Corolla* between rotate and campanulate :

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* From πολεμος, *war.* It is said the discovery of its supposed properties, occasioned a war between two kings.

campanulate : the *tube* short, yellow both within and without, as is the margin of the mouth : *limb* spreading, of five oval, even, somewhat acute, faintly striated segments, of a most beautiful and vivid purplish-blue. *Filaments* much protruded, white, dilated, yellow and hairy at the base. *Anthers* large, roundish, nearly white. *Style* also protruded. *Stigmas* often only two.

This is a most desirable addition to our gardens, for which we are indebted to Mr. DRUMMOND, who gathered it on the highest of the Rocky Mountains, where it is rare, and varied with white flowers. It is perfectly hardy, easily cultivated, flowering during the month of July, and bearing a profusion of blossoms of a much richer colour than any hitherto known species of the Genus.

In size it comes nearest to P. *Richardsoni**, (Bot. Mag. t. 2800,) but is more tufted in its growth, having smaller and shorter leaflets, numerous and ascending *stems*, much smaller and differently coloured *flowers* with their segments greatly narrower and truly oval. There is no question but it will soon become general in our gardens. The bright colour of the blossoms is retained long after the plant is dried.

Fig. 1. Flower. 2. Stamen. 3. Calyx, including the Pistil.—More or less *magnified.*

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* Since that Species was published, I have received from Dr. FISCHER the same plant, marked P. *speciosum,* FISCHER, MSS., gathered by LANGSDORFF in the islands of St. Paul and St. Lawrence :—and again I have another species from the same liberal friend, a native of Kamtschatka, marked " P. *lanatum,*" which I can only distinguish from P. *Richardsoni,* by its more downy leaves. P. *moschatum,* WORMSKIOLD'S MSS., in my Herbarium, I am disposed to refer also to P. *Richardsoni.*

W.J.H. delt.   Pub by S.Curtis Walworth April 1.1830.   Swan Sc

EPIDENDRUM PALLIDIFLORUM. PALE-FLOWERED EPIDENDRUM.

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Class and Order.

GYNANDRIA MONANDRIA.

Generic Character.

Columna cum ungue labelli longitudinaliter connata in tubum (quandoque decurrentem ovarium). *Massæ pollinis* 4, parallelæ, septis completis persistentibus distinctæ, basi filo granulato elastico auctæ. *Br.*

Specific Character.

EPIDENDRUM *pallidiflorum;* caule simplici paucifolio, foliis distichis lineari-oblongis obtusis, floribus in corymbo pedunculato terminali, petalis obovato-lanceolatis patentibus planis, labello trilobo, lobis æqualibus intermedio marginibus involutis.

DESCR. Parasitic. *Roots* fibrous, thick, fleshy, pale brownish, almost white. *Stem* about a span high, rounded at the base and scarcely compressed upward. *Leaves* four to five, distichous, sheathing at the base, linear-oblong, coriaceous, nerveless, obtuse, generally slightly twisted, pale-green. *Peduncle* terminal, compressed, with two or three laterally compressed bracteæ. *Flowers* several in a loose corymb. *Petals* nearly equal, spreading, obovato-lanceolate, plane, somewhat fleshy, white, greenish at the tips. *Column* semicylindrical, white, rose-purple at the extremity, below combined with the lower half of the lip, whose extremity only is free, three-lobed, pure white, the lobes equal, two lateral ones plane, very obtuse, the intermediate one with the margins involute, so as to give the appearance of its being acute. *Anther* pale purple. *Pollen-masses* in two pairs, oval, yellow, with stalks about as long as themselves.

Sent with many other rare tropical Orchideous plants, by the Rev. LANSDOWN GUILDING, to the Glasgow Botanic Garden; where, treated like the rest of the parasitical Orchideæ, it flowered in May, 1829. In habit it resembles E. *fuscatum,* but the flowers are very different in size, color, and especially in the form of the lip.

Fig. 1. Flower. 2. Pollen-Masses.—***Magnified.***

2981.

W.J.H. del.t Pub. by S. Curtis, Walworth, April 1.1830. Swan Sc

LANTANA SELLOVIANA. MR. SELLOW'S LANTANA.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—VERBENACEÆ.)

Generic Character.

Cal. brevissimus, obsolete dentatus. *Cor.* tubulosa, limbo inæqualiter bilobo. *Stam.* inclusa. *Drupa* baccata, 1-pyrena, pyrene 2-loculari, 2-spermo, rima loculis interposita. *Spr.*

Specific Character and Synonyms.

LANTANA* *Selloviana ;* foliis subsessilibus (petiolatisve) ovatis acutis rugosis piloso-scabris, capitulis subglobosis, involucris cordatis capitulo minoribus. *Link et Otto.*

LANTANA Selloviana. *Link et Otto. Ic. Pl. Sel. v.* 1. *p.* 107. *t.* 50.

LIPPIA montevidensis. *Spreng. Syst. Veget. v.* 4. *P. II. p.* 231.

DESCR. *Stem,* in our plant, twiggy, slender, branched, procumbent, pubescent. *Leaves* opposite, ovate, somewhat pointed, on petioles less than half their own length, crenato-serrated, pubescent on both sides, wrinkled, middle-rib and veins prominent behind; veins oblique, branching only towards the edge of the leaf, but connected by small transverse, secondary veins. *Peduncles* (two and a half

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* From *lento,* to bind, a name formerly applied to a species of VIBURNUM, with which these plants somewhat agree in habit.

inches long,) axillary, opposite, pubescent. *Flowers* in flattish capitula. *Bracteæ* ovate, imbricated, pubescent. *Calyx* minute, 4-toothed, hairy. *Corolla* bright purplish-red, pubescent, paler on the outside. *Tube* (three lines long,) dilated in its middle, yellowish at its base. *Limb* spreading, scarcely half the length of the tube, four-lobed; *lobes* blunt or emarginate, the upper one the longest, the two side-lobes the smallest and equal. *Stamens* reaching to about the middle of the tube.

A plant of this exceedingly pretty species, was received from Berlin, at the Edinburgh Garden, last year. It flowered in the stove in the months of December and January. The seeds had been received by M. Otto, from Montevideo, in 1822, having been gathered by the Prussian Botanist, M. Sellow. There is, perhaps, no species more deserving of cultivation. Graham.

Fig. 1. Flower and Bractea. 2. Portion of the Tube to show the Stamens. 3. Pistil.—*Magnified.*

2982.

W.J.H.del.^t

Pub by S. Curtis Walworth, April 1.1830

POTENTILLA NIVEA, *var.* MACROPHYLLA.

SNOWY CINQUE-FOIL, *large-leaved var.*

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Class and Order.

ICOSANDRIA POLYGYNIA.

(Nat. Ord.—ROSACEÆ.)

Generic Character.

Cal. decemfidus, segmentis alternis minoribus. *Petala* 5. *Pericarpia* receptaculo sicco affixa.

Specific Character and Synonyms.

POTENTILLA *nivea*; foliis ternatis, foliolis ovalibus profunde grosseque serratis villosis subtusque præcipue ubi caudicantibus, caulibus paucifloris, petalis obcordatis calyce longioribus.

POTENTILLA nivea. *Linn. Sp. Pl. p.* 715. *Willd. Sp. Pl. v.* 2. *p.* 1109. *Pursh Fl. Am. Sept. v.* 1. *p.* 353. *Lehm. Pot. p.* 184. *Nestl. Pot. p.* 74. *Fl. Dan. t.* 1035 *(excellent). Brown in Parry's* 1*st Voy. App. p.* 277. *Richards. in Frankl.* 1*st Journ. App. ed.* 2. *p.* 20. *Cham. et Schlecht. in Linnæa v.* 2. *p.* 21.

Var. *macrophylla*; foliis majoribus subtus niveo-tomentosis, floribus minoribus. TAB. 2982.

DESCR. of the var. *macrophylla. Root* fusiform, long, fibrous. *Leaves* almost all of them radical, petiolate, ternate. *Leaflets* an inch and a half to two inches or more long, intermediate one the largest, oval or oval oblong, cuneate and entire at the base, the rest cut into very deep and large ovate or oblong acute teeth, two lateral ones broadly ovate, rounded at the base in the lower margin, above oblique and entire, the rest with deep and large teeth, above dark-green, even, with a few scattered white hairs most conspicuous at the margin, beneath clothed

with a pure white down, giving the leaves a most beautiful appearance. *Petiole* two to four or five inches long, downy. *Stipules* adnate, subulate, brown. *Stems* erect, dichotomous, but not frequently divided; at the divisions of the stems bearing a trifid or ternate *bractea,* below, rarely one or two small petiolated leaves, slightly downy. *Flowers* small, on long, slightly pubescent, very slender peduncles. *Calyx* slightly hairy: five inner segments a little longer and broader than the five outer ones, or bracteolæ. *Petals* obcordate, about a fourth larger than the calyx.

POTENTILLA *nivea* is found on the more elevated mountains of the South of Europe, and in all the Northern parts of Europe, Asia, and America, extending North nearly to the utmost limits of phænogamous vegetation. But in these different countries it puts on very different appearances, varying extremely in the size of the plant, in the relative dimensions of the foliage, in the nature and quantity and colour of the pubescence, both above and below the leaves, in the number and size of the flowers upon the stalk, and in the magnitude of the petals. LEHMAN has, I think, with much judgment, united with it the P. *betonicæfolia* of NESTLER *(Gmel. Sibir. v. 3. t. 37. f. 1.)* which has the leaves of our var. but the flowers twice the size, and the *leucophylla* of PALLAS. BROWN seems disposed to consider the P. *Vahliana,* LEHM. (the *hirsuta* Fl. Dan. t. 1390), the *Jamesoniana* of GREV. and the *macrantha** of LEDEBOUR as too nearly allied to, if not the same as *nivalis.* Of these, the small Arctic one of Captain PARRY'S Voyages, as well as from the highest summits of the Rocky Mountains, scarcely three inches high, with its leaves silky on both sides, and our present var. with its tall stem, large leaves and small flowers, may be considered the opposite extremes. In Mr. DRUMMOND'S rich collection may be seen all the intermediate gradations.

Our present plant was raised, along with many other POTENTILLÆ, in the Glasgow Botanical Garden, from seeds gathered in the prairies of the Rocky Mountains by Mr. DRUMMOND. The plant flowered in May and June, in the open ground, and is perfectly hardy.

Fig. 1. Flower.—*Magnified.*

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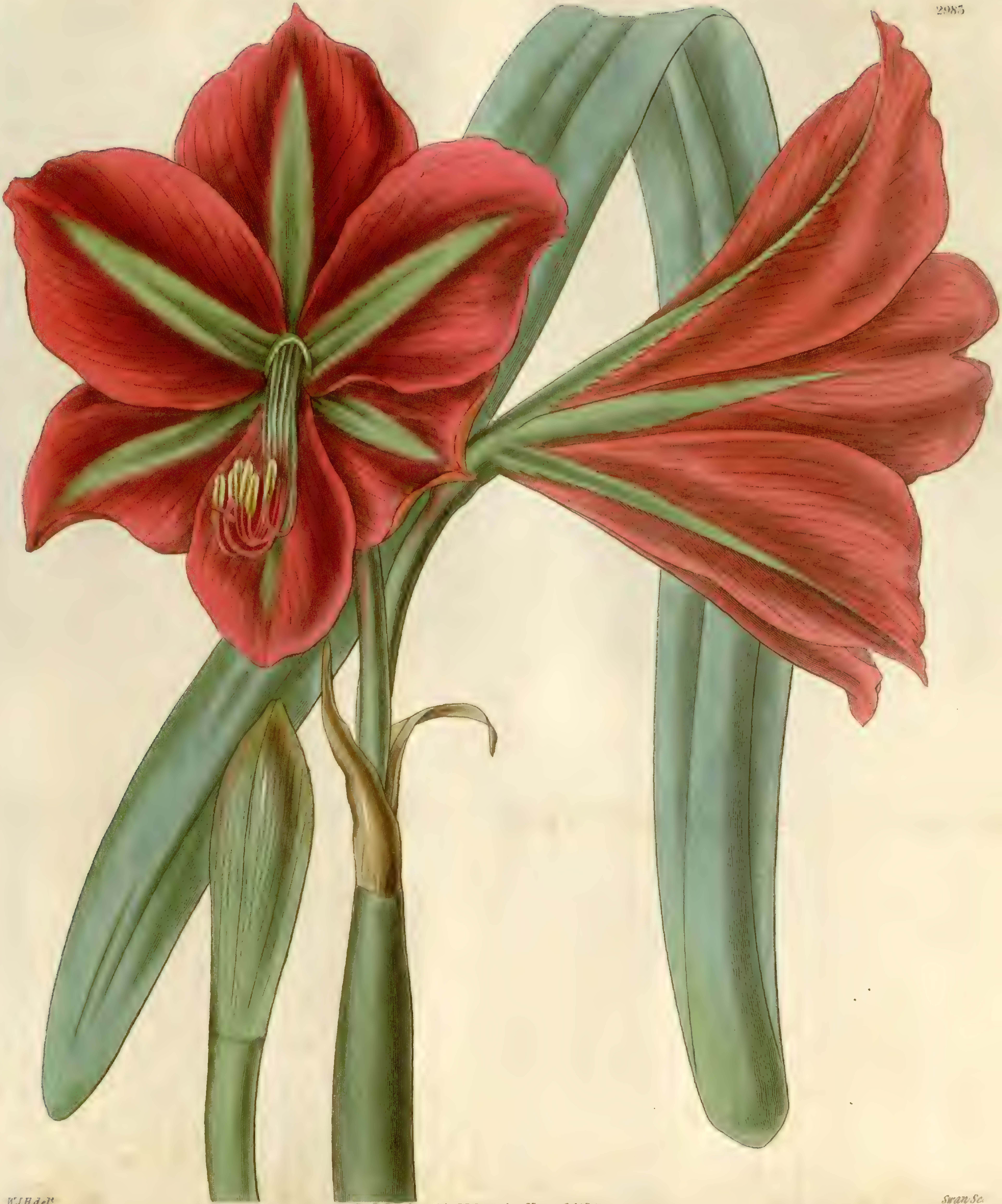
* CHAMISSO and SCHLECHTENDAL add to this list, *P. angustifolia* of WILLD. and LEHM., and *P. uniflora* of LEDEBOUR.

2983



W. J. H. delᵗ

Pub by S Curtis, Walworth, May. 1.1830

Swan Sc.

AMARYLLIS AULICA, *var.* platypetala, glaucophylla. GLAUCOUS-LEAVED, BROAD-PETALED AMARYLLIS.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—AMARYLLIDEÆ.)

Generic Character.

Cor. 6-partita, subregularis vel ringens, fauce nuda vel squamis coronata. *Stamina* declinata vel recta. *Caps.* trilocularis. *Spr.*

Specific Character and Synonyms.

AMARYLLIS* *aulica;* biflora ringens, tubo subnullo, faucis corona contracta triangulari, lacinia ima limbi inferne involuta, staminibus declinatis inclusis.

(α.) *stenopetala;* perianthii laciniis tenui-acuminatis, tribus exterioribus angustioribus, tubi corona distincta. *Ker in Bot. Reg. t.* 444.

(β.) *platypetala;* perianthii laciniis obtusioribus, 5 superioribus æqualibus multo latioribus, tubi corona distincta. A. *aulica,* β platypetala. *Lindl. in Bot. Reg. t.* 1038.

(γ.) *glaucophylla;* perianthii laciniis obtusioribus 5 superioribus æqualibus multo latioribus, tubi corona obsoleta, foliis glaucescentibus. (TAB. 2983.)

The name of HARRISON, not as an individual, but as a family, stands intimately connected with the Botany, and, especially, the Horticulture of Great Britain. Among the

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* After the Nymph, celebrated by VIRGIL, on account of the beauty of the flowers.

most successful cultivators in this country, will ever rank Mrs. Arnold Harrison and Richard Harrison, Esq. of Aigburgh, near Liverpool; and the richness of their collections is mainly due to another of the family, William Harrison, Esq. of Rio; whose country residence, in the vicinity of the Organ Mountains, has given him facilities, of which he has had the zeal and the judgment to profit, for collecting some of the most beautiful plants that the richest country of the tropics can boast. From that source, novelties are continually arriving at the gardens of Aigburgh; and amongst them, has lately been received the subject of the present plate. I fear it must be considered as one of the varieties of A. *aulica*, but so well marked, and so beautiful, as almost to merit the rank of a species. It indubitably approaches much nearer to the *var.* β of Bot. Reg. t. 1038, than to the original species, t. 444 of the same work: but differs in the splendour of its colour, which pencil cannot imitate, in the lengthened green lines of each division of the perianth, in the small size of the crown of the tube, and in its glaucous leaves. I may mention, that at the very time I received the beautiful flowering specimen here figured from Mrs. Arnold Harrison, bulbs of the same variety were blossoming in our Glasgow Botanic Garden, which had been presented to us from Brazil by — Pearson, Esq., and their markings and colour were in every respect the same.

2984

W.J.H. delt.

Pub. by S. Curtis, Walworth, May 1. 1830.

Swan sc.

POTENTILLA GRACILIS. TALL UPRIGHT CINQUEFOIL.

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Class and Order.

ICOSANDRIA POLYGYNIA.

(Nat. Ord.—ROSACEÆ.)

Generic Character.

Cal. 10-fidus, laciniis alternis minoribus. *Pet.* 5. *Caryopses* nudæ, plurimæ, in receptaculo sicco, sæpe piloso. *Spr.*

Specific Character and Synonym.

POTENTILLA *gracilis;* caule erecto elato superne corymboso-paniculato molliter hirsuto, foliis longe petiolatis 5-natis superioribus solummodo sessilibus, foliolis lanceolatis profunde pinnatifido-serratis subtus albo-tomentosis, stipulis magnis lanceolatis, calyce sericeo petalis obcordatis longiore.

POTENTILLA gracilis. *Douglas MSS.*

DESCR. *Root* perennial, with many brown scales at its summit, from which arises a *stem,* a foot to a foot and a half high, rounded and slender in the wild specimens, more robust when cultivated, every where clothed with rather long, more or less patent, soft and silky hairs, paniculato-corymbose upwards. *Leaves* few upon the stem, the upper ones sessile and ternate, the uppermost ones laciniated and bracteiform, the rest, and especially the radical ones, upon long hairy stalks, quinate : the *leaflets* three to four inches long, cut into very deep pinnatifid segments or serratures, pointing upwards, varying somewhat in breadth, dark green above with a few scattered hairs, beneath clothed with a dense, white, somewhat downy substance,

mixed with silky hairs. The *stipules* are particularly large, lanceolate, acuminate, hairy, especially at the margin and beneath, where they are whitish. *Flowers* in the wild state almost corymbose, in the cultivated plant paniculated, but still nearly level-topped, *peduncles* forked, with generally a single flower between the forks. *Cal.* of five broadly-lanceolate, and five alternate, smaller, almost subulate segments, all of them clothed with rather long and silky hairs. *Petals* broadly obcordate, wavy, longer than the calyx.

This is a handsome, and, in our gardens, a strong-growing species of the Genus, but much better deserving the name of *gracilis,* as seen on the banks of the Columbia and the plains of the Multnomah rivers, where it was discovered by Mr. Douglas, than as it appears after cultivation. I cannot refer it to any described species, nor does it appear to have been gathered by any other Naturalist, except by Dr. Scouler, who accompanied Mr. Douglas as far as Fort Vancouver; unless it be the same as a Rocky Mountain species, collected by Mr. Drummond, as I suspect it will prove to be.

The seeds were introduced to the Horticultural Society, and the plants, from which the annexed figure was taken, flowered there in the month of July, 1829.

Fig. 1. A Panicle, with the upper part of the Stem. 2. An upper Stem-leaf. 3. A radical Leaf, *nat. size.* 4. Petal, and 5. Calyx.—Slightly *magnified.*

J.H. del.

Pub. by S. Curtis Walworth May 1.1830.

Swan Sc.

(2985)

EUTOCA FRANKLINII. CAPTAIN FRANKLIN'S EUTOCA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—HYDROPHYLLEÆ. *Br.*)

Generic Character.

Calyx 5-partitus, persistens. *Cor.* subcampanulata: membranulæ tubi decem, per paria filamentis alternantes. *Stam.* exserta. *Stylus* bifidus. *Caps.* polysperma, unilocularis, bivalvis, valvis indivisis medio placentiferis. *Br.*

Specific Character and Synonyms.

EUTOCA* *Franklinii;* erecta, foliis pinnatifidis bipinnatifidisve, racemis secundis multifloris aggregatis, stylo glaberrimo, ovulis placentæ singulæ viginti pluribus.

EUTOCA Franklinii. *Br. in Frankl.* 1*st Journ. ed.* 1. *App. p.* 764. *t.* 27. *Spreng. Syst. Veg. v.* 1. *p.* 569.

DESCR. *Root* annual, subfusiform, sparingly fibrous. *Stem* eight to ten inches high, hairy, scarcely branched. *Leaves* alternate, two to three inches long, downy, pinnatifid, the segments linear-oblong, obtuse, those of the root, where they are crowded, often again pinnatifid or incised, the uppermost ones or bracteæ, with one or two large laciniæ, or entire. *Flowers* in racemes, arising from the axils of the uppermost leaves or bracteæ, crowded at the summit. *Calyx* deeply five-partite; the segments linear-lanceolate, erect, hairy. *Corolla* subcampanulate, the *limb*

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* From ευτοκια, *fertility,* probably in consequence of the number of its flowers or seeds.

spreading, with five rounded, beautiful blue segments, inclining to purple: *tube* nearly white, with three nerves corresponding to each of the segments, each of these three lateral nerves has a longitudinal plate or membrane, opening towards the central nerve, and reaching to the bottom. *Stamens* five, inserted at the base of the corolla. *Filaments* reaching considerably beyond the tube, white, with spreading hairs. *Anthers* oblong, reddish. *Germen* ovate, hairy, one-celled, but from two opposite sides there projects a parietal, longitudinal *receptacle,* which thickens as it projects into the centre of the *capsule,* where the two almost meet and bear many *ovules*.

This interesting plant, discovered by Dr. Richardson, during the first over-land arctic expedition, growing abundantly amongst trees that had been destroyed by fire, on the banks of the Missinippi, was named by Mr. Brown in honor of the commander of that enterprize, and one of the most distinguished men of the present century. It must now have become general in our gardens, for seeds have been distributed to various gardens, the result of the second journey*, where they have succeeded, as a hardy plant, and where they recommend themselves by the bright colour, and profusion of their blossoms, a good deal resembling those of a Polemonium. Our drawing was made from plants of the Glasgow Botanic Garden, where they flowered in June.

Fig. 1. Flower. 2. Portion of the Corolla, to show two of the Lamellæ of the Tube, with a Stamen. 3. Stamen. 4. Pistil. 5. Section of the Pistil. —*Magnified.*

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* Mr. Drummond found it growing also in burnt woods, in the country extending from the Grand Rapid to the Rocky Mountains.

W.J.H. del.^r

Pub by S. Curtis Walworth May. 1 1830.

Swan Sc.

(2986)

CROCUS AUREUS. GOLDEN CROCUS.

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Class and Order.

TRIANDRIA MONOGYNIA.

(Nat. Ord.—IRIDEÆ.)

Generic Character.

Cor. tubo longissimo, *limbo* regulari, 6-partito. *Stam.* corollæ inserta. *Stigmata 3,* dilatata, serrulata aut incisa. *Caps.* 3-locularis. *Spr.*

Specific Character and Synonyms.

CROCUS[*] *aureus;* biflorus, staminibus stigmata superantibus, filamentis glabris, corollæ laciniis oblongis incurvato-patentibus (unicoloribus), bulbo fibris compactis truncato.

CROCUS aureus. "*Sm. Prod. Fl. Gr. v.* 1. *p.* 24. *Fl. Græc. v.* 1. *p.* 25. *t.* 35.

CROCUS lagenæflorus. *Haw. in Hort. Soc. Tr. v.* 1. *p.* 135. *γ. Salisb. Parad. Lond. t.* 106."

DESCR. *Bulb* moderately large, coated with a compact mass of numerous short, parallel fibres. *Foliage* and *tubes* of the *flowers* surrounded for a greater part of their length with large, sheathing, circumvolute scales, of a whitish colour, tinged at the upper part with brown, and of so firm a texture, that the former year's scales remain, torn and ragged, but of a dark brown colour, around the newly formed ones. *Leaves,* at the time of flowering, protruded for one third of their length beyond the sheathing scales, linear-acuminate, erecto-patent. *Flowers* rather small, always two from the same root; their pale and slender tubes about as long as the leaves; the *limb* of a rich, uniform, golden colour within and without, free from any stain or stripe, cut into six deep divisions, which, in sunny weather, are patent, but slightly incurved, concave, oblong, obtuse. *Mouth of the tube* naked, just above which the three pale-yellow *stamens* are inserted. These are erect: the *filaments* glabrous: the *anther* linear-oblong, obtuse or even notched, sagittate at the base. *Stigmas* pale, considerably shorter than the stamens, nearly equal to each other in height, compressed, dilated upwards, and jagged at the extremity.

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[*] κροκη, *a thread,* or filament, from the appearance of the saffron of the shops, which is the dried stigmas of C. *sativus.*

The CROCUSES are certainly amongst the most admired of our garden plants; the variety and beauty of their blossoms, and their appearance at an early season of the year, at a period when "Winter still lingers in the lap of Spring," combine to render them universal favourites. Yet there are few plants more imperfectly characterized by authors than the individuals of the Genus in question: their names are undergoing perpetual changes, and scarcely any two Botanists are agreed as to what should constitute a species, and what a variety. Such is the case with the one now before us. It is cultivated in our gardens as the *aureus* of SMITH, and it truly deserves the name, for it is the richest of all the yellow CROCUSES I am acquainted with. But this has been referred by Mr. HAWORTH to the C. *lagenæflorus* of SALISBURY, and by ROEMER and SCHULTES and SPRENGEL to the C. *luteus* of LAMARCK, (the C. *vernus*, CURT. in Bot. Mag. t. 45,) along with the C. *mæsiacus* of KER, (Bot. Mag. t. 1111). To me it appears distinct, having a peculiar neatness and elegance in the shape of its blossoms. Besides being cultivated in gardens, it appears annually in the grounds of the park of Sir CHARLES BUNBURY, at Barton, near Bury, along with C. *minimus* (C. *reticulatus* of SMITH's Eng. Fl.) Beautiful specimens have been kindly communicated from that station, by W. CHRISTY, Jun. Esq., which were procured by N. S. HODSON, Esq. of Bury St. Edmonds, and others by ROBERT BEVAN, Esq. of the same place: and from those specimens our drawings were made. The old, ragged, long scales surrounding the new plant, were remarkable in all the specimens.

Fig. 1. Section of the Limb of the Flower, to show the Stamens and Stigmas. 2. Stamen. 3. Stigmas.—More or less *magnified.*

2987

W J H del.

Pub. by S. Curtis Walworth May 1 1830.

POTHOS CRASSINERVIA. THICK-RIBBED POTHOS.

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Class and Order.

TETRANDRIA MONOGYNIA.

(Nat. Ord.—AROIDEÆ.)

Generic Character.

Spatha monophylla. *Spadix* cylindraceus, undique floribus tectus. *Perianthium* tetraphyllum. *Bacca* di- tetrasperma.

Specific Character and Synonyms.

POTHOS *crassinervia;* foliis breve petiolatis obovato-lanceolatis nervosis reticulatis basi attenuatis, apice acuto costa utrinque prominente, scapo petiolum excedente, spadice cylindraceo spatham lato-lanceolatam superante.

POTHOS crassinervia. *Jacq. Ic. v.* 3. *t.* 609. *Willd. Sp. Pl. v.* 1. *p.* 685. *Humb. Nov. Gen. et Sp. v.* 1. *p.* 63? *Roem. et Sch. Syst. Veget. v.* 3. *p.* 453. *Spreng. Syst. Veget. v.* 3. *t.* 766.

DESCR. *Root* consisting of a number of clustered, fleshy, wavy fibres, such as are common to parasitical plants, as this probably is, on the trunks of trees in its native forests. From this root, among several brown scales, arises a beautiful tuft or crown of leaves, two to three feet long, including the short *petiole,* erecto-patent, subcoriaceous, dark green, obovato-lanceolate, quite entire, attenuated at the base, at the extremity acute: the *midrib* thick and strong, prominent on both sides, especially at the base, where, on the upper surface, it presents a sharp angle in the centre: beneath it is indeed more prominent; but in my specimens

less carinated: from this central rib, there branch off on each side several rather distant, patenti-oblique, parallel ones, which, where they approach the margin, run for a considerable way up close with it: at their axils is a thickened gland. All these lateral ribs or nerves are connected by less distinct, reticulated veins. *Petiole* semiterete, thickened upwards, especially where it unites with the midrib behind, sheathing at the base, whence arises the *scape*, scarcely a span high, terete in my specimens. *Spatha* ovato-lanceolate, membranous, reflexed, purplish-brown, shorter than the cylindrical spadix, which is purplish, more or less tinged with green.

This fine plant, to the foliage of which, a drawing on the largest sized paper could scarcely do justice, was sent to our stoves from Demerara, by JAMES FRASER, Esq. of Belladrum, near Inverness, a gentleman who has contributed many rare plants from the same country to our Botanic Garden. It flowered in the month of January, 1830.

Notwithstanding some slight discrepancies, I am disposed to consider this species to be the same with the one above referred to in JACQUIN's Icones; but the scape is there angular in its upper part, the spadix is slenderer, and the leaves are more acuminated. The foliage agrees better with the description of HUMBOLDT's P. *crassinervia;* but then he describes the spadix as a foot long, on which account, probably, he is doubtful if it be identical with JACQUIN's plant.

Fig. 1. Plant *much reduced.* 2. Base of a Leaf, and a flowering Scape, *nat. size.*

2988.

W.J.H. del.

Pub. by S. Curtis Walworth May 1.1830.

(2988)

CREPIS MACRORHIZA. LARGE-ROOTED HAWK'S BEARD.

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Class and Order.

SYNGENESIA POLYGAMIA ÆQUALIS.

(Nat. Ord.—COMPOSITÆ. DIV. CICHORACEÆ.)

Generic Character.

Involucrum polyphyllum, squamis ad basin laxis. *Receptaculum* nudum. *Pappus* sessilis, simplex.

Specific Character and Synonym.

CREPIS[*] *macrorhiza;* glaberrima, caulibus solidis foliatis oblongis dentatis sessilibus (inferioribus in petiolum attenuatis) nitidis subcarnoso-coriaceis, pedunculis superne subincrassatis squamosis, involucro subfarinoso-pubescenti, radice crassa. *Lowe MSS.*

CREPIS macrorhiza. *Herb. Banks.*

DESCR. " From the crown of the very large and thick *root,* which, in its native country, penetrates deep into the fissures of the perpendicular rocks, spring, annually, several leafy, simple, herbaceous, but firm and solid *stems,* about a foot high, forming a tuft of shining, dark green foliage. The stems, from their situation, are, generally more or less decumbent. The *leaves* are of a rigid, almost coriaceous substance, pointed, and strongly toothed. *Flowers* numerous, small, bright yellow, closing soon after the plant is gathered, forming a loosely branched, leafy panicle: their *peduncles* clothed with permanent, linear, scattered scales, similar to those at the base of the involucre, which are also permanent. *Involucre* slightly farinoso-pubescent, mealy, particularly between the scales. *Pappus* perfectly sessile." LOWE *in litt.*

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[*] κρηπις, in Greek, signifies *a slipper* or *last;* but why it should be applied to this plant we are not informed.

I have, on a former occasion, in the Bot. Miscellany, taken occasion to mention, that the Rev. R. T. LOWE, B. A. of Christ's College, Cambridge, and late Travelling Bachelor from that University, had been most successfully exploring the Natural History of Madeira and the adjacent islands, and that he was preparing materials for a work on that interesting subject. This work is now more fully announced, as in a state of forwardness, under the unassuming title of a " Prodromus Faunæ et Floræ Maderensis." Few travellers are better fitted for such a task than Mr. LOWE, and we have reason to know, that his book will contain much new and important matter, and is one that has long been a desideratum. If the number of unknown species detected by Mr. LOWE be not very considerable, there are assuredly among them many that are undescribed, or only noticed in the Banksian Herbarium, which contains an extensive collection from Madeira, made by MASSON. The present is one of that number, as has been determined by a comparison of the specimens.

It is constantly found growing on the perpendicular faces of dry, sunny rocks, never in soil, in many of the vallies of Madeira, at an altitude above the level of the sea of from three to four thousand feet, flowering in July and August. Seeds, as well as specimens, have been communicated by Mr. LOWE, and the plant has flowered in the Glasgow Botanic Garden in the month of June ; but there, whilst young, its flowering was hastened by artificial heat. There is no doubt, that if the roots are kept well drained, the plant will flourish in the open air.

Fig. 1. A Floret. 2. Fruit. 3. Hair of the Pappus, *magnified.* 4. Portion of the Root, *nat. size.*

2989

W.J.H. delt

Pub by S Curtis, Walworth, May 1 1830.

(2989)

CONOSTYLIS ACULEATA. PRICKLY CONOSTYLIS.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—HÆMODORACEÆ. *Br.*)

Generic Character.

Perianthium superum, coloratum, campanulatum, profunde 6-fidum, regulare, lanatum pilis ramulosis, persistens. *Stamina* 6. *Antheræ* erectæ. *Ovarium* 3-loc., polyspermum. *Stylus* conico-dilatatus, cavus. *Stigma* breve. *Capsula* apice dehiscens, stylo cavo tripartibili coronata. *Placenta* centralis, triquetra. *Semina* numerosa.—Herbæ *perennes.* Radix *fasciculato-fibrosa.* Caules *brevissimi.* Folia *disticha, aversa ensiformia, basibus semivaginantibus equitantibus.* Flores *scapum sæpius simplicem terminantes, capitati, corymbosi vel spicati.* Br.

Specific Character and Synonyms.

CONOSTYLIS* *aculeata ;* perianthiis intus glabris, scapis corymbisve divisis, foliis glabris margine aculeatis, aculeis intersticio brevioribus. *Br.*

CONOSTYLIS aculeata. *Br. Prodr. v.* 1. *p.* 300. *Spreng. Syst. Veget. v.* 2. *p.* 26.

DESCR. Perennial. *Root* a tuft of rigid branching fibres. *Leaves* from a span, to nearly a foot in height, linear, very rigid, distichous in their insertion, and partially sheathing with their dark-purple, shining bases, twisted, marked with

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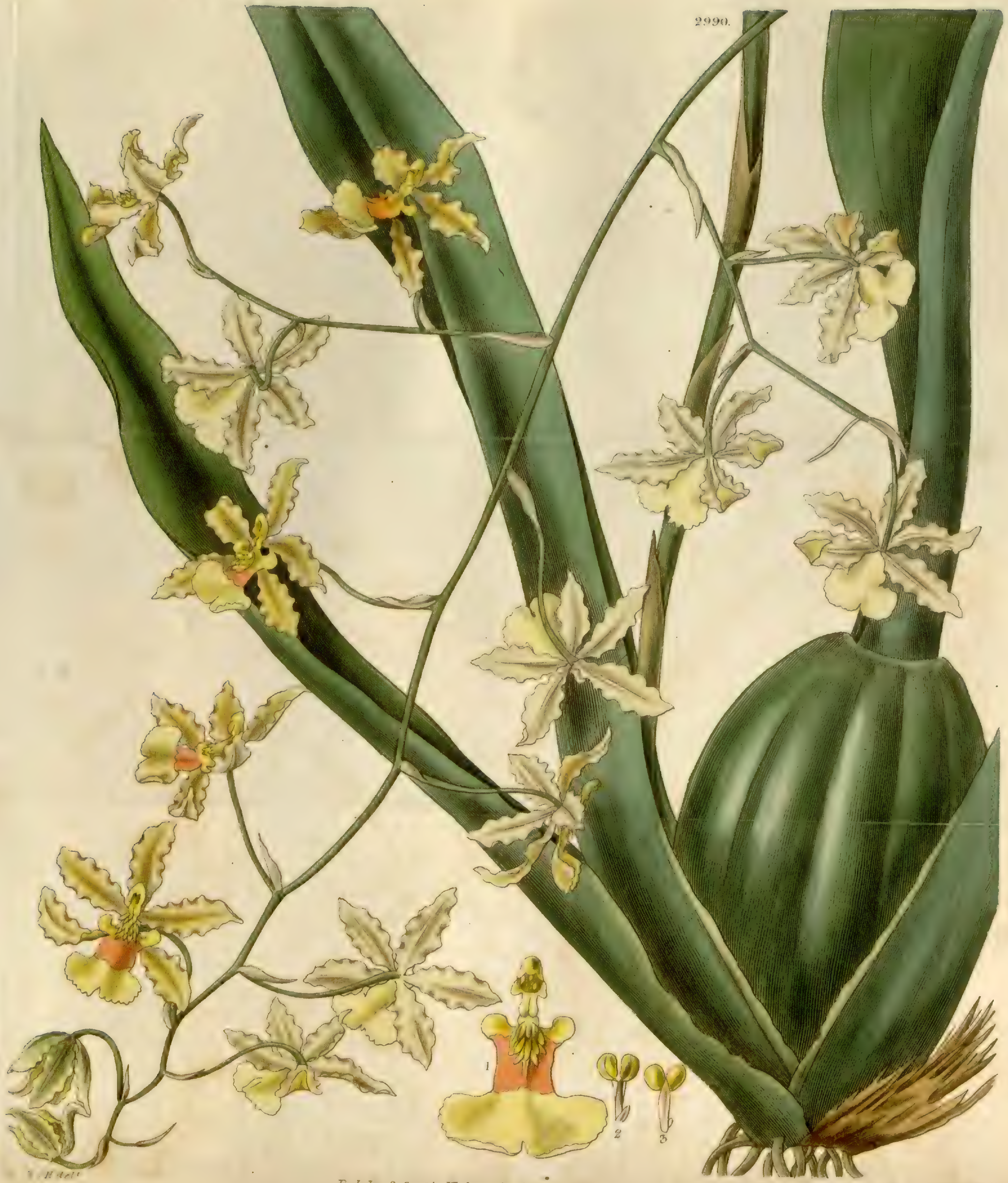
* From κωνος, *a cone,* and στυλος, *the style,* in allusion to the cone-shaped base of the style.

fine lines, gradually attenuated into a sharp point, their margins beset with short rigid setæ or prickles, all pointing upwards, all of them perfectly glabrous and somewhat glossy. *Scape* shorter than the leaves, erect, flexuose, terete, downy, with a lanceolate bractea near the base, and others smaller at the extremity, where the scape divides into many branches and bears a rather dense *corymb* of pale, cream-coloured *flowers*, with sometimes a single bracteated flower lower down upon the scape. *Perianth* campanulate, with a small subulate bractea at its base, half five-cleft, its tube in the lower part incorporated with the germen, with the segments ovato-lanceolate, downy, with short branched pubescence externally, glabrous within. *Stamens* six, inserted into the base of the segments. *Filaments* very short. *Anthers* linear, oblong, two-celled, yellow. *Germen* ovate, its lower half forming one piece with the base of the perianth, tapering gradually upwards into a hollow style, and tipped with an obscurely three-lobed stigma. The germen has three cells, and three longitudinal fleshy receptacles, in the inner angles, covered with ovules. *Capsule* clothed with the persistent perianth, and opening through the persistent style to its base into three valves.

Of this curious Genus, four species are described by Mr. Brown, all natives of the Southern shores of New Holland: but none, that I am aware, has yet been figured, nor any cultivated in our gardens, until seeds of the present individual were received at the Botanic Garden both of Edinburgh and Glasgow, which both now possess living plants. The specimen here figured was communicated by Dr. Graham, from the Edinburgh collection, in January, 1830. We are indebted to Mr. Fraser for the introduction of this plant; as I am likewise for well dried specimens, from which the fruit here represented was taken. Mr. Brown observes, that this Genus differs from Anigozanthus in its perianth and style; and from Lanaria (Argolasia. Juss.) in the structure of the ovary and fruit.

Fig. 1. Flower. 2. Stamens. 3. Pistil. 4. Section of the Germen. 5. Ripe Capsule enveloped in the Perianth, *natural size*. 6. Ripe Capsule, from which the Perianth is removed.—All but fig. 5, *natural size*.

2990.



W. H. del.

Pub. by S. Curtis, Walworth. June 1. 1830.

Swan Sc.

(2990)

ONCIDIUM ALTISSIMUM. TALL-STEMMED ONCIDIUM.

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ. *Juss.*)

Generic Character.

Labellum explanatum, lobatum, basi tuberculatum. *Petala* patentia (2 antica nunc connata). *Columna* alata. *Massæ pollinis* 2, postice bilobæ; medio affixæ processu communi stigmatis. *Br.*

Specific Character and Synonyms.

ONCIDIUM* *altissimum;* labello panduriformi trilobo, lobo medio subreniformi maximo bifido, lobis lateralibus rotundatis versus columnam bidentatam curvatis, scapo altissimo paniculato, foliis ensiformibus.

ONCIDIUM altissimum. *Swartz, Act. Holm.* 1800, *p.* 240. *Willd. Sp. Pl. v.* 4. *p.* 112. *Br. in Ait. Hort. Kew. ed.* 2. *v.* 5. *p.* 215. *Spreng. Syst. Veget. v.* 3. *p.* 728.

EPIDENDRUM altissimum. *Jacq. Am. p.* 229. *t.* 141. *Swartz, Prodr. p.* 123.

CYMBIDIUM altissimum. *Swartz, Nov. Act. Ups.* 6. *p.* 94.

DESCR. Parasitic on the trunks of trees. *Bulb* as large as a turkey's egg, dark green, quite smooth, remarkably compressed, sharp at the edges, and marked with a few longitudinal, elevated lines, bearing one solitary *leaf* at the extremity, from a foot and a half to two feet long; while from the base, at each of the edges, there arise generally two other and shorter *leaves* with sheathing bases; all of them are sword-shaped, bright-green, somewhat cartilaginous and fleshy, keeled at the back, but not distinctly nerved or striated. From the axils of one of the root-leaves appears the *scape,* which is from four to six feet and more in length, as thick as a goose-quill below, upwards gradually tapering, much branched and panicled, and bearing many handsome, bright-coloured, but not fragrant, rather large *flowers.* At the base of each ramification, and of each flower, is a membranous, sheathing, whitish, conspicuous *bractea.* *Petals* nearly equal, spreading horizontally, broadly lanceolate, acute, much waved, pale yellow, with large olive-brown blotches. *Lip* large, also spreading, about as long as the *petals,* panduriform, its lateral and lesser lobes situated at the base, rounded, and incurved towards the centre of the flower: the *lip* is then contracted in its centre, and expands at the extremity into a large, reniform lobe, slightly crenate and deeply emarginate, often with a small point in the sinus. The *crest* occupies the base of the lip, is very prominent and papillose, the papillæ pointing downwards. The colour of the lip is a sulphur yellow, much deeper at the base, and having a broad, chesnut-coloured band, crossing it transversely, but surrounding the crest, which is thus rendered the more conspicuous. *Column* yellow, short, two-lobed in front, and with a blunt tooth on each side of the *stigma.* *Anther* yellow. *Pollen Masses* yellow, fixed to a rather long stalk, and bearing a portion of the stigma at the base.

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* From ογκος, *a swelling*, or protuberance, in allusion to the tubercle at the base of the labellum.

It is probable that this species of Oncidium, which was introduced to the Royal Gardens at Kew, in 1793, by Rear Admiral Bligh, was shortly after lost; otherwise so beautiful a plant would soon have become general in our collections, and would have found a place in some or other of the numerous Botanical journals. It is a native of the West India islands. Our plants, at the Glasgow Botanic Garden, were communicated by the Rev. Lansdown Guilding, from St. Vincents, and have been easily cultivated in a house almost filled with tropical Orchideæ, among which, the flowers of this were of the longest duration, and not the least attractive in point of beauty. Some of the scapes were nearly seven feet long.

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[*] Fig. 1. Lip and Column. 2. Under side, and 3, upper side of a Pollen Mass.—*Magnified.*

At Tab. 2956, for Neottia? *grandiflora,* read Ulantha (from ȣλος, *crisped,* and ανθος, *a flower,*) *grandiflora;* and add for Generic Character, *Pet.* patentia, superiore oblongo, planiusculo, reliquis obovatis, sinuato-crispatis, duobus lateralibus papillosis, basi attenuatis. *Labellum* lato-oblongum, papillosum, crispatum, disco lamellatum. *Columna* aptera. *Massæ pollinis* 4, lineares, curvatæ subfarinaceæ.

W.J.H.del.

Pub. by S. Curtis, Walworth, June 1. 1830.

Crocus minimus. Least Purple Crocus.

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Class and Order.

Triandria Monogynia.

(Nat. Ord.—Irideæ.)

Generic Character.

Cor. tubo longissimo, limbo regulari, 6-partito. *Stam.* corollæ inserta. *Stigmata* 3, dilatata, serrulata aut incisa. *Caps.* 3-locularis. *Spr.*

Specific Character and Synonyms.

Crocus *minimus;* stigmatibus erectis inclusis flore solitaris stamina superantibus, antheris acutis, foliis lineari-filiformibus, bulbis tunico membranaceo.

Crocus minimus. *Redouté, Pl. Lil. v.* 2. *t.* 81. *De Cand. Fl. Fr. ed.* 3. *v.* 3. *p.* 243. *Roem. et Sch. Syst. Veget. v.* 1. *p.* 367. *Duby et De Cand. Bot. Gall. v.* 1. *p.* 453. *Muller in Un. It.*

C. nanus. *De Cand. Syn. Gall. p.* 168.

C. reticulatus. *Sm. Engl. Fl. v.* 4. *p.* 262. (excl. syn.) *Hook. Brit. Fl. p.* 17.

Descr. *Bulb* small, rounded, with a dark-brown, membranous coat, below having the flattened layers of former years' bulbs. Above this are the sheathing *scales,* which surround the plant for about two-thirds of its length, and which are remarkably slender, whitish. *Leaves* three or four only, shorter than the flower, very narrow, linear-filiform, pale and depressed in the middle, having a flat, broad keel at the back, the margins revolute. *Flower* solitary: its *tube* slender, white, yellow upwards, where it widens to form the *limb,* which has six horizontally-patent, oblong, delicate, bluish-purple segments, nearly equal in size: the three outer having three deep-purple, feathery streaks;

the throat within is yellow. *Stamens* deep orange: *Anthers* sagittate, very acute. *Stigmas* longer than the stamens, of the same colour with them, two short, one much longer, slender, yet broader, and unequally laciniated at the extremity.

It is singular that nearly the first knowledge, if not the very first, of this plant among British Botanists, should arise from the circumstance of its being considered a native of this country. Mr. DAWSON TURNER communicated specimens to Sir J. E. SMITH as such, from Sir CHARLES BUNBURY'S Park, Barton, Suffolk. These were published in the English Flora as the CROCUS *reticulatus* of BIEBERSTEIN, and not having then seen their roots, I was led into a similar error in my own British Flora. The same friends who sent me recent specimens of C. *aureus* already figured, sent also the present one, and the slightest view of the bulbs was sufficient to satisfy me that it was quite different from the C. *reticulatus*: and I can only suppose that Sir JAMES E. SMITH, as was my case in the British Flora, taking it for granted that it belonged to the latter species, described the roots from the true plant in his own Herbarium.

I offer no apology for introducing this, a presumed British plant, into the Botanical Magazine: for besides that it is, as far as I can learn, unknown in our gardens, it is amply deserving of being cultivated, being as elegant, and as prettily varied with colour, as any in the Genus: and I think it may be reckoned among the most distinct. Its slender, sheathing scales, very narrow leaves, long stigmas, and the deep orange colour of these, and of the acute anthers, together with the membranous, not in the least reticulated, coat of the bulb, are some of its most prominent characteristics.

Fig. 1. Stamen. 2. Pistil. 3. Section of the Leaf.—*Magnified.*

2991

W J H delt

Pub. by S. Curtis Walworth, June 1.1830.

Swan Sc

EUPHORBIA COROLLATA. WHITE-FLOWERED SPURGE.

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Class and Order.

MONŒCIA MONANDRIA.

(Nat. Ord.—EUPHORBIACEÆ.)

Generic Character.

Involucrum androgynum, 4—5-fidum, extus appendiculis glandulosis (petala L. nectaria aliorum). Peripherici: pedicelli incerti numeri, singuli cum singulis staminibus articulati. *Germen* pedicellatum, centrale: *styli 3,* 2-fidi. *Capsula* 3-cocca. *Spr.*

Specific Character and Synonyms.

EUPHORBIA *corollata;* erecta, umbella ramis primariis subquinque repetitim dichotomis, bracteis foliisque elliptico-lanceolatis obtusis subtus hirsutulis, involucri glandulis late ovalibus appendicibus corollatis (albis), floribus subdioicis.

EUPHORBIA corollata. *Linn. Amæn. Acad. v.* 3. *p.* 122. *Sp. Pl. p.* 659. *Willd. Sp. Pl. v.* 2. *p.* 916. *Pursh, Fl. Am. v.* 1. *p.* 607. *Elliott, Carol. v.* 2. *p.* 559. *Spreng. Syst. Veget. v.* 3. *p.* 798.

DESCR. *Stems* about a foot high, nearly simple, rounded, glabrous. *Leaves* an inch or more long, scattered, varying much in shape, linear, obovato-lanceolate, or, generally, between elliptic and lanceolate, always sessile, very obtuse, rather dark green, glabrous above, somewhat pilose beneath, the margin quite entire. *Umbel* of about five rays or principal branches, which are several times dichotomous, bearing opposite *bracteæ* at the base of the forkings, which are similar to the leaves, only smaller. Beneath the umbel there are not unfrequently lateral, axillary peduncles, each resembling one of the rays or branches of the umbel. *Involucre* cup-shaped; its *glands* five, oval, fleshy, yellowish-green, dilated into a petaloid, large white membrane, so that the involucre looks like a five-petaled corolla. Mr. NUTTALL observes, that these involucres are diœcious. In the plant here figured they are only *pistilliferous*; whilst native specimens in my Herbarium, sent me by Mr. NUTTALL, and from which the dissections were taken, seem to be almost wholly *antheriferous* (fig. 1.); for I found a few of the flowers bearing *pistils*, though mixed with very imperfect *stamens*. Staminiferous flowers as in most of the Genus, only some of them appear to be combined by their pedicels. *Germen* three-lobed, greenish, slightly warted? *Styles* three, bifid, purplish.

Cultivated by ROBERT BARCLAY, Esq. at Bury Hill, whence that most liberal admirer and patron of Botany communicated the drawing here given. The plants flowered in the open air in July, and were raised from seeds sent from North America, by Mr. NUTTALL. According to LINNÆUS, it inhabits Canada, and thence extends as far south as the Carolinas.

It is one of the most remarkable of that extensive and curious Genus EUPHORBIA; and the appendages of the glands of the involucre might, if not examined with some care, be taken for the white, spreading petals of a corolla.

Fig. 1. Involucre with Stamens. 2. Staminiferous Flower, removed from the Involucre. 3. Pistilliferous Flower.—*Magnified.*

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W.J.H. del.

Pub. by S. Curtis Walworth June 1 1830

SPHACELE LINDLEYI. LARGE-FLOWERED SPHACELE.

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Class and Order.

DIDYNAMIA GYMNOSPERMIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

SPHACELE. *Benth. Cal.* campanulatus, subæqualis, 13—15-nerviis, venosus, 5-dentatus, intus fauce. *Corolla* tubo exserto fauce subinflata, bilabiata, labiis subæqualibus: superiori erecto, bifido, (vel emarginato) subplano; inferiori patente, 3-fido, lobis lateralibus reflexis, medio bifido, laciniis reflexis. *Stam.* 4, sub labiis superiori ascendentia. *Antheræ* biloculares, loculis linearibus divergentibus. *Stylus* apice subæqualiter bifidus. *Achenia* sicca, lævia. *Benth. in Bot. Reg. sub t.* 1289.

Specific Character and Synonyms.

SPHACELE* *Lindleyi;* ramis floccoso-tomentosis, foliis petiolatis ovato-lanceolatis basi obtuse hastato-sagittatis subtus tomentosis, superioribus sessilibus, axillis utrinque subtrifloris. *Benth.*

SPHACELE Lindleyi. *Benth. in Bot. Reg. l. c.*
STACHYS Salviæ. *Lindl. in Bot. Reg. t.* 1226.

DESCR. *Stem* shrubby, four-sided, three to four feet high, branched, the branches downy, white and woolly in the younger ones. *Leaves* petiolate, broadly ovato-lanceolate, crenate, wrinkled, soft and downy above, beneath pale, almost white and tomentose, with prominent veins; the base is cordato-hastate, with blunted lobes: the upper leaves become gradually smaller, sessile, ovate, and at length the uppermost ones are bracteiform. *Flowers* forming a lax, leafy *spike,* about three in the axil of each leaf or bractea, large, handsome. *Calyx* shortly stalked, tubuloso-campanulate, downy, and hence obscurely striated, cut into five subulate, rather unequal teeth, which are shorter than the tube of the corolla. *Corolla* a rather rich purple, slightly pubescent externally; the rest of it as described in the Generic Character. *Germen* seated upon a large, greenish gland. *Stigma* bifid.

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* From the Greek name of the *Sage*, to which this plant bears much resemblance.

This plant has been for some time cultivated in the greenhouses of the Botanic Gardens of Edinburgh and Glasgow; and at both these establishments it flowered in Autumn, 1828. Seeds were sent by Mr. CRUICKSHANKS, from Valparaiso, to whom I am indebted (as I am also to the Horticultural Society of London,) for dried specimens, both of it, and of S. *subhastata* and S. *campanulata* of Mr. BENTHAM.

The foliage of this plant would be considered by almost any one to belong to *Salvia;* the flowers to *Stachys* or *Betonica;* from the former, my friend Mr. BENTHAM (to whom Botany is indebted for a new and valuable arrangement of the LABIATÆ) says, that it differs by the length of the tube of the corolla, and from both, by the large, campanulate calyx, and the cells of the anthers, which are neither divaricate, as in *Stachys,* nor parallel as in *Betonica,* but linear, and divergent nearly at right angles with one another.

Fig. 1. Flower. 2. Corolla, with the Tube cut open to show the insertion of the Stamens. 3. Pistil and Gland.—*Magnified.*

W. J. H. del.

Pub. by S. Curtis Walworth, June 1.1830.

HELENIUM AUTUMNALE. AUTUMNAL ELECAMPANE.

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Class and Order.

SYNGENESIA POLYGAMIA SUPERFLUA.

(Nat. Ord.—COMPOSITÆ. Div. CORYMBIFERÆ.)

Generic Character.

Involucrum simplex, e squamis numerosis subæqualibus. *Receptaculum* nudum, margine paleaceo. *Flosculi* radii cuneati, 3—5-fidi. *Pappus* e squamis plurimis paleaceis.

Specific Character and Synonyms.

HELENIUM* *autumnale;* caule angulato, foliis lanceolatis serratis decurrentibus, disci corollis 5-fidis, radii 3—5-fidis.

HELENIUM autumnale. *Linn. Sp. Pl. p.* 1120. *Mich. Fl. Am. v.* 2. *p.* 133. *Pursh, Fl. Am. v.* 2. *p.* 560. *Willd. Sp. Pl. v.* 3. *p.* 2120. *Elliott, Fl. Carol. v.* 2. *p.* 401. *Spreng. Syst. Veget. v.* 3. *p.* 573. *Schuhkr, Bot. Handb. t.* 250.

DESCR. *Root* perennial. *Stem* two to three feet high, erect, branching upwards, marked with prominent angles from the decurrent margins of the leaves, slightly pubescent, as is the rest of the plant. *Leaves* scattered, lanceolate, the lowermost tapering into a broad and short footstalk, the rest sessile, more or less deeply serrated, except the uppermost ones, appearing minutely dotted when seen under a microscope, with a central rib, and a few parallel, lateral nerves. *Inflorescence* somewhat corymbose, the peduncles downy, slightly thickened upwards. *Involucre* simple, of about sixteen lanceolato-subulate scales, not longer than the disk, united below into a flattened base. *Flowers* large, showy, bright yellow. *Florets of the disk* short, tubular, glandular above and five-toothed, teeth erect, those of the ray twelve to fourteen, patent, then reflexed, cuneate, with from three to five large teeth at the extremity. *Receptacle* hemispherical, with lanceolate, chaffy, rather jagged scales at the margin. *Fruit* short, bluntly tetragonal, clothed with small, white, chaffy scales, and crowned with about seven or eight upright, larger, broadly subulate ones, constituting the *pappus*.

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* Said to have sprung from the tears of Helen.

A native of North America, and by no means an uncommon inhabitant of our Gardens, but I am not aware that any good figure of it is in existence. It flowers in the autumnal months, as the name implies, and is an ornament, especially valuable at that season, to our flower-borders.

Fig. 1. Inferior Leaf. 2. Floret of the Disk. 3. Scale of the circumference of the Disk. 4. Floret of the Ray. 5. Fruit, crowned with its scaly Pappus.—*Magnified.*

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W.J.H. del.t

Pub. by S. Curtis, Walworth. June 1 1830.

Swan sc.

ASTER LÆVIGATUS. SMOOTH-LEAVED MICHAELMAS DAISY.

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Class and Order.

SYNGENESIA POLYGAMIA SUPERFLUA.

(Nat. Ord.—COMPOSITÆ. DIV. CORYMBIFERÆ.)

Generic Character.

Receptaculum nudum. *Pappus* simplex. *Cor.* radii plures 10. *Involucri* imbricati; squamæ inferiores (nonnunquam) patulæ.

Specific Character and Synonyms.

ASTER * *lævigatus;* glaber, superne paniculatim ramosus, panicula foliolosa, foliis subcoriaceis lævibus, inferioribus ovato-lanceolatis in petiolum alatum attenuatis parce serratis, superioribus sensim minoribus sessilibus integerrimis basi cordatis, involucri squamis erectis laxiusculis glabris.

ASTER lævigatus. *Willd. Sp. Pl. v. 3. p.* 2246. *Pursh, Fl. Am. v. 2. p.* 553. *Elliott, Carol. v. 2. p.* 359. *Spreng. Syst. Veget. v. 3. p.* 538.

DESCR. *Plant* two to three feet high, perennial, every where glabrous and smooth. *Stem* erect, simple, below purple, not so thick as a goose-quill, a little zigzag, and slightly angular, gradually tapering upwards, and terminating in a copious and much branched panicle. *Leaves* large below, four to five inches long, (including the petiole) broadly, or ovato-lanceolate, somewhat coriaceous, dark green above, paler beneath, obscurely serrated, in the upper half veiny, tapering gradually into a winged footstalk, which half embraces the stem with its base. Upwards upon the stem, the leaves gradually become smaller, less stalked and serrated, till at length upon the numerous branches of the panicle, where they are very numerous, they are lanceolate, with a semiamplexicaul, cordate base, and are scarcely half an inch long. *Flowers* moderately large, solitary at the extremities of the more elongated leafletted and slender branches. *Involucre* ovate, attenuated at the base, imbricated with linear-lanceolate, upright, rather lax scales. *Corollas* of the *ray* purple; those of the *disk,* yellow. *Receptacle* papillose.

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* *Aster,* a star, in allusion to its stellated flowers.

We received this Aster at the Glasgow Botanic Garden, from Mr. Nuttall. I have dried specimens of the same from the Rev. Mr. Schweinitz, and I believe it to be the plant of the American Botanists. Whether or not it is so of Willdenow, who is the original authority for the species, I cannot say. His description is too imperfect to enable me to form a judgment. It is well characterized by its large panicles with many handsome flowers; its large wing-stalked lower leaves; and by the great number of small leaves, or they might almost be called bracteas, upon the branches of the panicle.

It flowers, like most of the Genus, late in the autumn, and deserves a place in every collection of hardy herbaceous plants.

Fig. 1. Floret of the Ray. 2. Receptacle and Involucre cut through vertically. 3. Central Floret.—*Magnified.*

2996.

Greville del.

Pub. by S. Curtis, Walworth, June 1. 1830.

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OCYMUM MONTANUM. MOUNTAIN BASIL.

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Class and Order.

DIDYNAMIA GYMNOSPERMIA.

(Nat. Ord.—LABIATÆ.)

Generic Character.

Cal. ovatus vel campanulatus, 5-dentatus, dentis superioris ovato-membranacei marginibus decurrentibus alatus, post anthesin reflexus. *Cor.* tubo calyce subbrevior, bilabiata, labio superiori quadrifido, inferiori integerrimo subplano. *Stam.* 4, declinata. *Filamenta* libera ; *superiora* basi sæpius dentata v. penicellata. *Antheræ* ovato-reniformes, loculis confluentibus. *Stylus* apice subulatus, æqualiter bifidus. Verticillastri *sæpius multiflori, interrupte spicati,* spicis *simplicibus v. dense thyrsoideo-paniculatis. Benth.*

Specific Character and Synonym.

OCYMUM *montanum ;* filamentis integris nudis paululum exsertis, corolla calycem vix excedente, verticillis approximatis racemosis, foliis lato-ovatis acutis serratis. caule ramisque pubescentibus tetragonis.

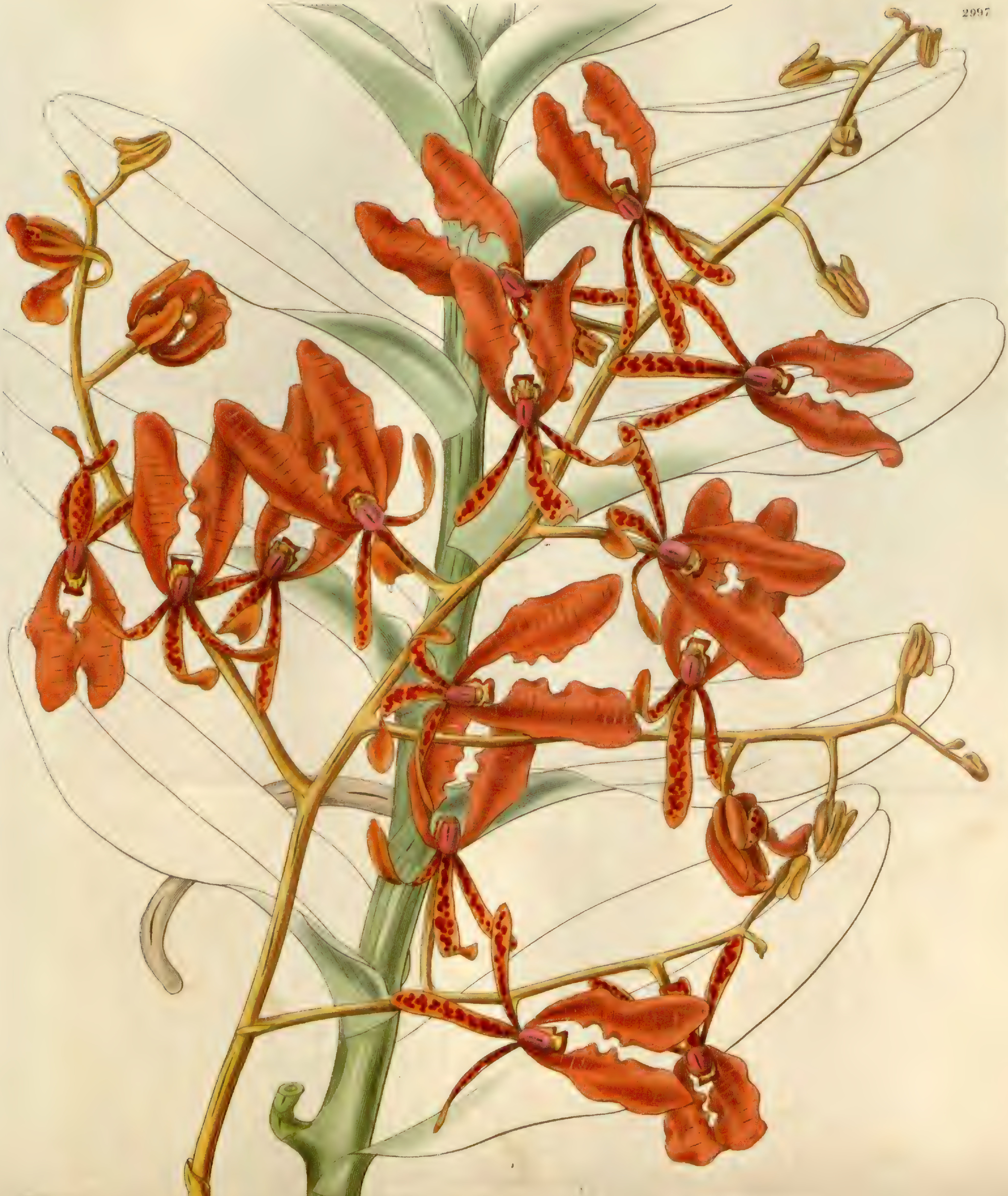
ALBACCA montana. *W. Hamilton, MSS.*

DESCR. Apparently an annual, eight or ten inches high, with an erect branching *stem,* four-sided as well as the short opposite branches, and downy. *Leaves* on rather long stalks, the younger ones somewhat oblong and acuminated, the older ones three inches and more long, broadly ovate, acute, glabrous or nearly so, serrated. *Petioles* downy, slender. The *flowers* are small, arranged in whorls each of six, three on each side, and these are placed in terminal, leafless racemes, the principal one on the stem, lesser ones on the branches. *Calyx* as in all of this Genus, with curious decurrent margins to the upper tooth, which soon curve in above the back of the calyx, so as to make that part appear boat-shaped, slightly hairy, after flowering becoming greatly enlarged. *Corolla* nearly white, scarcely longer than the calyx, five-lobed; the lobes spreading, the lower one rather the largest. *Stamens* free from teeth or hairs, declined, the extremity only ascending. *Anthers* small, ovate or cordate. *Style* rather longer than the stamens. *Stigma* bifid; the segments bent back or recurved.

The same remark will here hold good which was made by our estimable predecessor in the Editorship of the present work, when describing the OCYMUM *sanctum* (t. 2452): "there are so many species of OCYMUM which are but indifferently defined, that it is almost impossible to decide whether this may not have been already described." It was raised two years ago, in the garden of our valued friend, P. NEILL, Esq., Canon Mills, Edinburgh, from seeds communicated to him by Dr. W. HAMILTON, of Plymouth, and a drawing of it was sent to us from the elegant pencil of Dr. GREVILLE.

Upon the same plant, indeed, Dr. HAMILTON has frequently written to me, and having discovered that it did not accord with the old character of the Genus OCYMUM, he was disposed to form a new one of it under the name of ALBACCA (ALBAHACAS being the Spanish name for the Columbian *Basils*). But I think my obliging and learned friend will agree with me that it entirely accords with the Genus, as it is now remodelled by Mr. BENTHAM. This species, like the rest of the *Basils*, is fragrant. It inhabits the mountains about Carthagena, where it is known by the name of *Albahaca del monte*, and whence the seeds were obtained by EDWARD WATTS, Esq. of that place, and introduced to our gardens through Dr. HAMILTON, a gentleman who has long paid the most devoted attention to West Indian Botany. It requires the heat of the stove for its cultivation.

Fig. 1. Flower. 2. Corolla. 3. Calyx enlarged.—*Magnified.*



W. J. H. del.

Pub. by S. Curtis, Walworth, July 1, 18

(2997 2998)

RENANTHERA COCCINEA. SCARLET RENANTHERA.

* * *

Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Petala patentia, 3 inferiora (quoad axin florum) subæqualia, lineari-spathulata, 2 superiora multo majora, undulata, unguiculata. *Labellum* sessile, parvum, bituberculatum, inferne conico-saccatum, 3-lobum, *lobis lateralibus* erectis, rotundatis, *intermedio* acuto reflexo basi constricto. *Germen* rectum. *Columna* brevis, aptera. *Anthera* opercularis, obtusa, decidua, pseudo-bilocularis. *Massæ pollinis* 2, postice bilobæ, pedicellatæ; pedicello lato membranaceo: *glandula* ad basin magna.

Specific Name and Synonyms.

RENANTHERA * *coccinea.*
RENANTHERA coccinea. *Lour. Fl. Cochin. v.* 2. *p.* 637. *Bot. Reg. t.* 1131.

DESCR. Parasitic upon the trunks of trees, sending out, not only from the base of the stem, but also, here and there, from between the leaves, large, thick, whitish, fleshy, simple fibres. *Stem* about one foot and a half or more high, slightly flexuose, nearly as thick as the human finger, yellowish-green, obscurely striated. *Leaves* many, distichous, rather distant, linear-oblong, thick, fleshy, emarginate at the point and generally unequal, having a midrib keeled beneath, the base nearly amplexicaul, but not sheathing. *Scape* arising from the side of the stem among the leaves, but not from the axils, three feet high in the present individual, terete, wavy, orange-coloured, glabrous, reddish above, and bearing a many-flowered, splendid *panicle*. Below, and at the base of the ramifications, is a yellow, roundish acute, appressed scale or bractea. *Flowers* large. *Petals* spreading horizontally, unequal, the three lower ones (in regard to the axis of the flowers,) linear-spathulate, obtuse, scarcely waved, rather dingy orange, with bright red stains on the upper side, about an inch and a half long; two upper ones much larger, broadly lanceolate, singularly crisped and waved at the margin, obtuse, contracted at the base so as to be clawed, the claws a little incurved laterally, thus bringing the petals nearly parallel with each other ; the colour is a rich, rather velvety, deep crimson, sometimes obscurely and transversely banded with paler lines; beneath uniformly orange in the centre, redder at the margin. *Lip* very small, sessile, jointed upon the base of the column, pale yellow beneath, with a conical, crimson, saccate spur at some little distance from the base, three-lobed, the two lateral lobes erect, rounded, margined and streaked with red, and having two pale-yellow tubercles in the centre; middle lobe ovate, acuminate, reflexed, deep purple-red, pale yellow at the base. *Column* of the same colour, except within, where it is pale yellow with purple streaks, semicylindrical, the sides a little inflexed above, but not winged. *Anther* operculiform, subhemispherical, purple, with a pale yellow line on the top ; within imperfectly two-celled. *Pollen Masses* two, subglobose, wavy, yellow, each with a small lobe at the back, and fixed to the top of a thin, broad stalk or membrane, which has the margins above inflexed, and is fixed at the base upon a large, yellowish gland, which laps over the top of the convex, transverse *stigma*. *Germen* an inch, or an inch and a half long, not twisted, resembling a pedicel, orange red.

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* From *ren*, a kidney, and *anthera*, the anther: so named by LOUREIRO, from the shape, as he says, of the *anthers* or *pollen-masses*.

For the opportunity of giving a figure of this singular and beautiful orchideous plant, I am indebted to Mr. Cooper, the able director of the gardens of the Right Hon. Lord Milton, at Wentworth House, who sent me the noble specimen here represented, in the latter end of March, 1830. From the great care that was employed in the packing, the flowers were in as entire perfection, as if the plant had been still growing in the stove, not a petal being

injured

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W.J.H. delt

Pub by S Curtis Walworth. July. 1830.

Swan Sc

injured or displaced; and in this state of undiminished beauty the blossoms continued for many days, though cut from the parent plant.

It inhabits woods in Cochinchina, and is cultivated in China on account of the richness of the colour of the flowers; if indeed it be not a native of that country; for I have excellent specimens, sent to me by my valued friend Mr. MILLETT from Canton. Among a set of Chinese drawings from the same place, presented to me by Mrs. HALKET, is a very faithful representation of this parasite. In this country the plant has been known for some years; but it had never flowered in our stoves till the year 1827, when its blossoming at Claremont was attributed to the skilful management of Mr. FAIRBURN, gardener to His Royal Highness Prince LEOPOLD, who tried the effect of tying moss round the stems, keeping it constantly damp and exposed as much as possible to the rays of the sun.

In habit, the stems, and leaves, and roots of this plant have a considerable affinity with the Genus VANDA of Mr. BROWN; nor are its essential parts of the fructification widely different: the chief distinction seems to reside in the form and relative inequality of the petals.

TAB. 2997. Upper part of a Panicle, and portion of the Stem and Leaves, *nat. size.*

TAB. 2998. Fig. 1. A Flower. 2. A back view of the same, slightly *magnified.* 3. Front view of the Column and Lip. 4. Side view of the same. 5. Front view of a Column with its Anther. 6. The same, with the Anther-case removed: the Pollen Masses still attached to the top of the Column. 7. Inside view of the Anther-case. 8. Upper view of the Pollen Masses, with the Stalk and Gland. 9. Under side of ditto.—All more or less *magnified.*

Pub. by S. Curtis, Walworth; July. 1.1830.

Swan

RANUNCULUS CARDIOPHYLLUS. AMERICAN HEART-LEAVED CROWFOOT.

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Class and Order.

POLYANDRIA POLYGYNIA.

(Nat. Ord.—RANUNCULACEÆ.)

Generic Character.

Cal. 5-sepalus, sepalis basi non solutis deciduis. *Pet.* 5, rarius 10, intus basi squamula foveolari nectarifera instructa. *Stam.* ovariaque plurima. *Cariopsides* ovatæ, subcompressæ, in mucronem aut cornu semine vix longius desinentes, læves, striatæ aut tuberculatæ, in capitulum globosum cylindraceumve dispositæ. *D C.*

Specific Character and Synonym.

RANUNCULUS **cardiophyllus;* pubescenti-hirsutus, foliis subcoriaceis glauco-viridibus radicalibus rotundato-cordatis basi subprofunde emarginatis grosse serrato-crenatis, caulinis palmato-multifidis laciniis linearibus, calyce patente petalis dimidio breviore, fructibus oblongis.

RANUNCULUS cardiophyllus. *Hook. Fl. Bor. Am. v.* 1. *p.* 14. *t.* 5. *B.*

DESCR. *Root* consisting of a tuft of rather long, crowded, fleshy fibres, thickest upwards, clothed with many small, hair-like *radicles,* perennial. *Stem* from six inches to nearly a foot high, simple, or slightly branched upwards, pubescenti-hirsute, as is almost every part of the plant, especially

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* From *rana,* a frog : the species frequently inhabiting places where those animals abound.

the back of the foliage. *Leaves* of a thick and somewhat coriaceous texture, and of a dark bluish-green ; the lower ones stalked, those from the root broadly, almost rotundato-cordate, with rather a deep sinus at the base, undivided, the margins deeply and coarsely crenato-serrate: the lower stem-leaf is ovate, palmato-pinnatifid, with linear segments, more or less incised; the uppermost two or three are sessile, palmated with deep, linear, spreading, incised or entire segments. *Flowers* upon long peduncles, with closely-pressed hairs, large, handsome, very bright yellow. *Calyx* of five very concave, hairy, yellow-green leaves, spreading. *Petals* nearly orbicular, slightly waved. *Pistils* collected into an oblong head, each *germen* subglobose, terminated by an oblique, slightly curved, subulate *style,* about as long as the slightly downy *germen.*

This, is one of the many new discoveries made by Dr. Richardson and Mr. Drummond in the second overland Arctic expedition, under the command of Capt. Sir John Franklin. It was found by the former in the central prairie and limestone districts of Canada, and by the latter, in alpine prairies of the Rocky Mountains, between lat. 52° and 55°. From seeds, brought home by these Naturalists, plants have been raised in the Glasgow Botanic Garden, which flowered in May, 1830, having been protected by a frame during winter. If I had any doubt of its specific distinctness whilst describing this plant from dried specimens, I can feel none now that I have seen it growing. From the size and bright glossy yellow of the flowers, and the length of time they remain expanded, it is likely to prove a great acquisition to our collections of hardy plants.

Fig. 1. Petal. 2. Pistil.—*Magnified.*

3006

W. J. H. del^t

Pub. by S. Curtis Walworth, July 1. 1830

INDIGOFERA SYLVATICA. ANGULAR-STEMMED INDIGO.

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Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. 5-fidus, lobis acutis. *Vexillum* rotundatum, emarginatum. *Carina* utrinque calcare subulato notata, demum sæpe elastice deflexa. *Stam.* diadelpha. *Stylus* filiformis, glaber. *Legumen* teretiusculum aut planum aut tetragonum, polyspermum, bivalve, rarius oligospermum, ovatum, imo monospermum, subglobosum. *Semina* ovata, utrinque truncata, isthmis cellulosis sæpe disjuncta. Herbæ *aut* suffrutices.—Stipulæ *a petiolo distinctæ, parvæ.* Pedunculi *axillares.* Flores *racemosi, purpurei, cærulei aut albi.* Folia *nunc simplicia (pinnata ad impar reducta) imparipinnata aut digitata, foliolis sæpe basi stipellatis.* Pili *nunc omnes, nunc plerique strigosi, centro adfixi adpressi.* D C.

Specific Name and Synonyms.

INDIGOFERA* *sylvatica;* erecta fruticosa, caule ramisque acute angulatis, foliis 4—7-jugis, foliolis subæqualibus ellipticis glaberrimis plerumque emarginatis, racemis folio brevioribus vel subæque longis.

INDIGOFERA sylvatica. *Sieber, Pl. exsicc. n.* 379. *Spreng. Syst. Veget. v.* 3. *p.* 278.

INDIGOFERA angulata. *Lindl. in Bot. Reg. t.* 2578.

INDIGOFERA speciosa. *Fraser MSS. et Hortul.*

DESCR. *Stem* erect, eight feet or more high, branchless below for about two feet, from which point it forms a pyramidal top, ramifying in every direction, the lower branches long and reclining (Mackay); both stem and branches of a dingy purplish colour, acutely angular, the extremely young shoots as well as the underside of young leaves, under a microscope, clothed with appressed hairs, among which are many thick, black hairs or glands, the falling of which, probably, in the old leaves, gives the dotted appearances mentioned by Sprengel as one of its specific distinctions. *Leaves* alternate, four to five inches long, of from four to seven nearly equal pinnæ. *Rachis* of the young leaves with an orange tuft of hairs on the upper side between every pair of pinnæ, and which persist, but turn brown in the older ones. *Stipules* small, subulate. *Pinnæ* opposite, shortly stalked, elliptical or oblong, sometimes approaching to ovate, obtuse, retuse, or not unfrequently notched, quite glabrous on the upper side. *Racemes* in the axils of the leaves on the upper branches, sometimes shorter than, sometimes as long as the leaves. *Flowers* numerous, of a bright rose colour, inclining to purple. *Calyx* very small, purplish, nearly equally five-toothed. *Vexillum* reflexed, rounded, emarginate, having a white, orbicular spot at its base, included in a horse-shoe-shaped, deep purple line, slightly downy at the back. *Alæ* and *keel* deflexed: the white claws of the petals of the latter in the fully expanded blossom have escaped from the calyx, and are reflexed upon the back of the keel.

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* From *Indigo,* the dye so called, and *fero,* to bear or produce.

Communicated by J. T. Mackay, Esq. from the College Botanic Garden, Dublin, where it was sent as well as to many other collections by Mr. Fraser, in 1808, from New Holland, under the name of *speciosa*, and as such, it is still generally known in our gardens. Mr. Sieber published it under the name of I. *sylvatica*, and well distinguished it from I. *australis*, though Professor De Candolle has united it with that species, and made a variety of Sieber's true I. *australis*. The leaves are liable to vary in width. As cultivated by Mr. Mackay in the conservatory, it is an extremely showy plant and deserving a place in every collection.

Fig. 1. Front view of a Flower. 2. Back view of ditto. 3. One of the Petals of the Keel.—*Magnified.*

W. J. H. del.

Pub. by S. Curtis. Walworth. July. 1. 1830.

Swan Sc.

BEGONIA LONGIPES. LONG FLOWER-STALKED BEGONIA.

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Class and Order.

MONŒCIA POLYANDRIA.

(Nat. Ord.—BEGONIACEÆ.)

Generic Character.

MASC. *Cal.* o. *Cor.* polypetala, petalis plerumque 4, inæqualibus. FŒM. *Cal.* o. *Cor.* petalis 4—9, plerumque inæqualibus. *Styli 3,* bifidi. *Caps.* triquetra, alata, trilocularis, polysperma.

Specific Character.

BEGONIA *longipes* ; caule crasso læviter sulcato glanduloso-aspero, foliis amplis oblique et valde inæqualiter cordato-rotundatis angulatis serratis supra nitidissimis glaberrimis subtus pallidis opacis subpubescentibus, pedunculis axillaribus elongatis superne dichotome-corymbosis, capsula ala maxima solitaria.

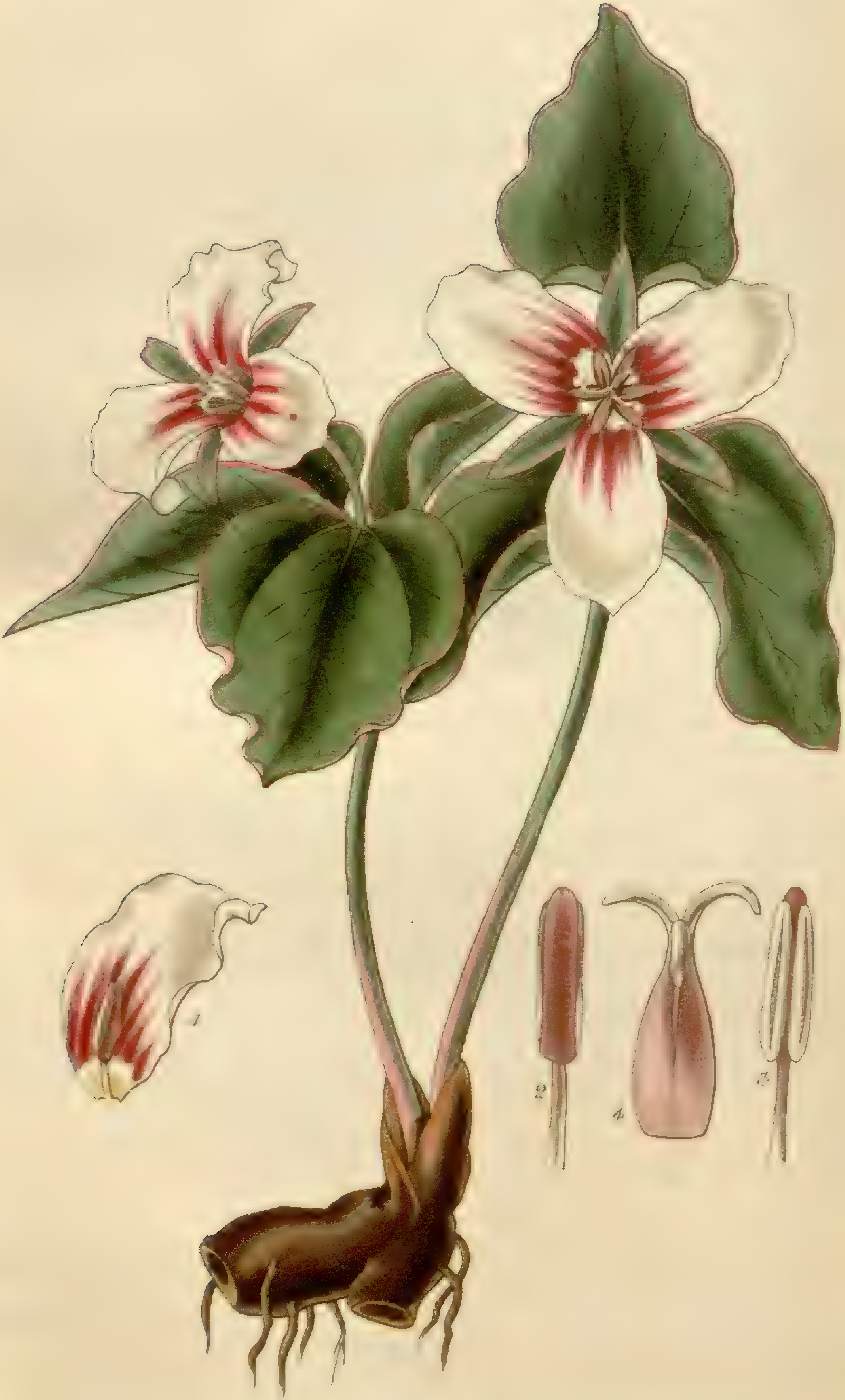
DESCR. *Stem* three feet or more high, and full an inch in diameter in the lower part, rounded, jointed, green, furrowed, rough with thick, short hairs or glands. *Leaves* alternate, large, a span and more long, when quite young, sheathed with an ovato-oblong deciduous bractea, extremely unequally rotundato-cordate, the lobe or ear remarkably large, angled, and serrated, radiately nerved, of a bright yellow green color, extremely glossy, and perfectly glabrous on the upper surface, beneath pale, opaque, with prominent nerves, and more or less pubescent, often with glands, and especially upon the nerves. *Peduncle* a foot and more long, rounded, glabrous, sometimes roughish with glands, especially below, above branched in a dichotomous manner, so that the flowers constitute a compound corymb. *Pedicels* glabrous, often tinged with red. *Flowers* generally three together, of which, one is usually fertile, the other two sterile. *Sterile Flowers* much the largest, of four white *petals*, two opposite ones rotundate, the other two inner ones oblong; all spreading. *Stamens* yellow. *Fertile Flowers* small. *Corolla* of five, nearly equal, small, white, seldom spreading *petals*. *Germen* triangular, two of the angles acute, the third extending into a large, broad, perfectly white wing, or lobe. At the base of the germen, are two small, subulate bracteas. Of the fertile flower the *pedicel* is broad and flat; it is filiform in the sterile ones.

The present species of BEGONIA is remarkable for the thickness of its furrowed stems; and for its ample, very glossy, bright green leaves, and the unusual length of its peduncles. Its nearest affinity is B. *dichotoma* of JACQ. Collectanea and Icones, t. 619; an inhabitant of the Caraccas: but there, the capsule has two small and one large wing, and the leaves are neither so glossy nor so glabrous.

B. *longipes* is an inhabitant of Mexico, and was introduced lately to this country by the Rev. J. HUNTLY of Kimbolton, who communicated it to the Liverpool Botanic Garden. I am indebted to my friends, the Messrs. SHEPHERDS, for a noble specimen, from a part of which the accompanying figure was taken. It flowered in the stove in the month of April, 1830.

Fig. 1. Flower scarcely expanded, showing the solitary wing of the Germen. 2. Section of the Germen.—*Magnified.*

3002



W. J. H. del.

Pub. by S. Curtis Walworth. July 1 1830.

(3002)

TRILLIUM ERYTHROCARPUM. BLOOD-STAINED TRILLIUM.

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Class and Order.

HEXANDRIA TRIGYNIA.

(Nat. Ord.—SMILACEÆ.)

Generic Character.

Cal. 3-phyllus. *Cor.* 3-petala, patens. *Filamenta* glabra. *Antheræ* longitudinaliter adnatæ. *Stigmata* linearia, sessilia, reflexa. *Bacca* trilocularis, polysperma.

Specific Character and Synonyms.

TRILLIUM* *erythrocarpum;* pedunculo cernuo, petalis ovalibus undulatis acutis (albis basi purpureis) calyce duplo longioribus, foliis cordato-ovatis subacuminatis petiolatis.

TRILLIUM erythrocarpum. *Mich. Am. v.* 1. *p.* 216. *Spreng. Syst. Veget. v.* 2. *p.* 150. *Sweet, Brit. Fl. Garden, t.* 212.

TRILLIUM pictum. *Pursh, Fl. Am. Sept. v.* 1. *p.* 244.

DESCR. Whole plant quite glabrous. *Root* a thick, horizontal, oblong, fleshy, simple or divided tuber, throwing down a few radicles, and bearing above, oblong-ovate, brownish scales, from which the stalks emerge: these latter are about a finger's length (scarcely a hand's length) high, terete, simple, reddish below, having, at the extremity, three, rather large, patent, cordato-ovate, shortly petiolate *leaves,*

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* From *trilix,* triple, from the ternate arrangement of the parts of the flower and leaves.

leaves, waved, entire, acute, or somewhat acuminate at the extremity, with three principal nerves and several lesser proceeding from these larger ones. From the centre of these leaves arises a curved flower-stalk, an inch to an inch and a half high, solitary, and producing a single *flower,* which is slightly drooping. *Calyx* of three lanceolate leaves, about half as long as the corolla, entire, green, often slightly margined with red. *Petals* three, spreading, oval, acute, waved, pure white, nerved, each having a large purple spot near the base. *Stamens* six, three opposite, and attached to the base of the petals, and three alternate with them. *Filament* dilated upwards, where, on the posterior side, are two linear, longitudinally-opening cells, abounding in white pollen. *Pistil: Germen* oblongo-oval, obsoletely three-angled, crowned with three sessile, recurved, white *stigmas,* which are minutely glandular above.

All the species of the Genus TRILLIUM are well deserving of cultivation in every collection of hardy plants: this is eminently the case with the present individual, which is rendered the more conspicuous, from its otherwise pure white petals being marked with a bright purple stain. It is probably not unfrequent in the more northern of the United States of North America, and in Canada. Our plants were sent to the Glasgow Botanic Garden by Mr. CLEGHORN from Canada, and they flowered in the month of April, having been slightly sheltered during winter.

Fig. 1. Petal and Stamen. 2, 3. Stamens. 4. Pistil.—*Magnified.*

3003.

H del.

Pub. by S Curtis. Walworth. July 1. 1830

EUTOCA SERICEA. SILKY EUTOCA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—HYDROPHYLLEÆ. *Br.*)

Generic Character.

Cal. 5-partitus, persistens. *Cor.* subcampanulata: membranulæ tubi decem, per paria filamentis alternantes. *Stam.* exserta. *Stylus* bifidus. *Capsula* polysperma, unilocularis, bivalvis, valvis indivisis medio placentiferis. *Br.*

Specific Character and Synonym.

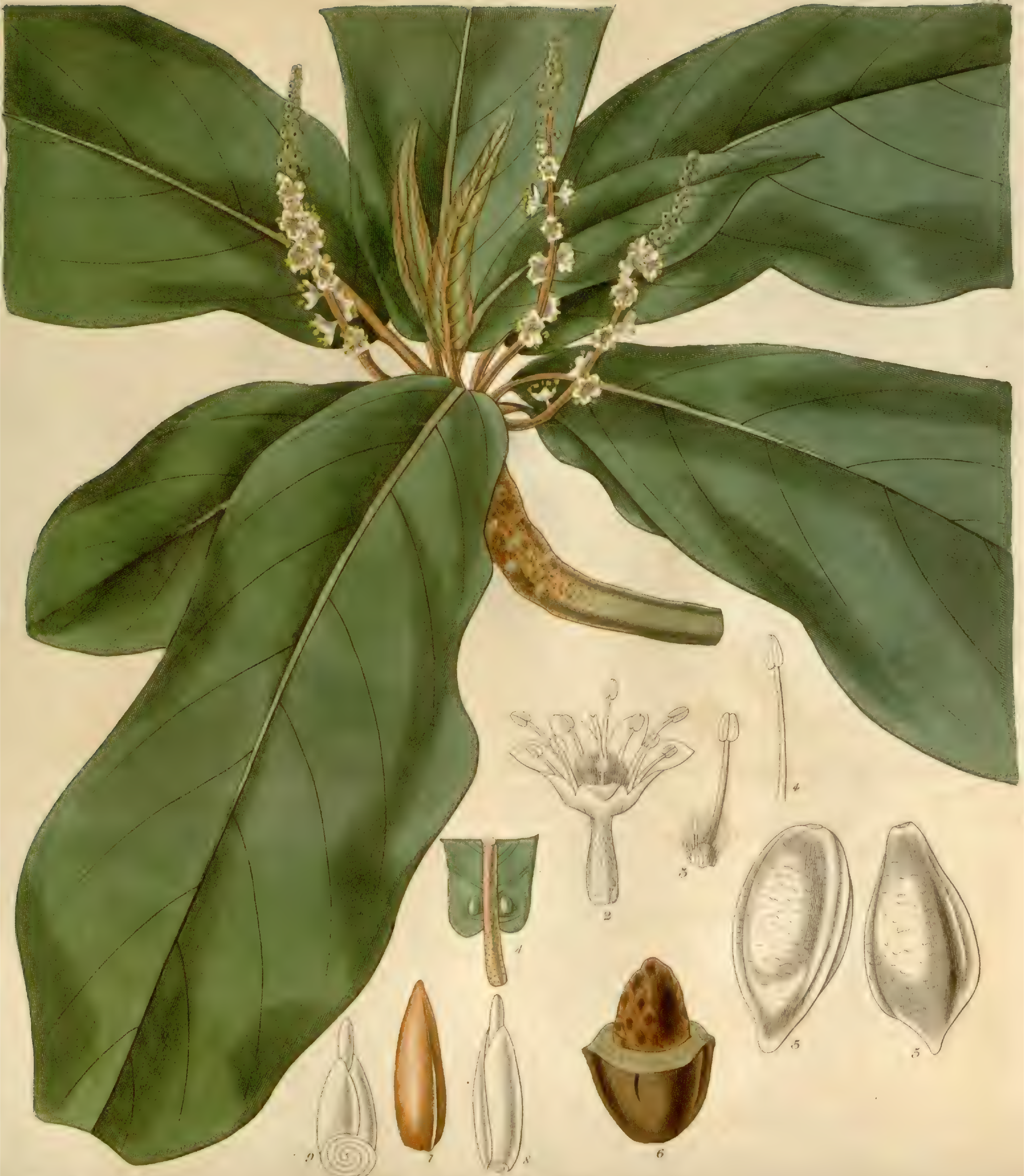
EUTOCA *sericea;* caule suberecto basi ramoso, foliis pinnatifidis sericeis, filamentis corolla triplo longioribus, ovulis pluribus.

EUTOCA sericea. *Graham MSS.*

DESCR. *Root* perennial. *Stem* ten inches high, herbaceous, suberect, angular, red, hoary, leafy, branched at the bottom. *Leaves* very numerous, spreading in a stellated manner from the crown of the root and lower part of the stem, or scattered along the latter, smaller and more entire upwards, pinnatifid, covered on both sides with subappressed, white hairs, channelled, subdecurrent along the petiole, the lower ones with their petiole about five inches long, the upper ones linear, entire, and about one inch long; segments incised on their outer edges, and each section has a strong, central nerve, prominent below and channelled above. *Spike* terminal, solitary, compound, dense, about half the length of the whole plant. *Spikelets* erect, gradually elongating, hairy. *Flowers* erect, on the upper side of the spikelets, expanding from below upwards. *Calyx* five-parted, segments linear, nearly smooth on the inner side, on the outer, covered like the pedicels, with long, spreading, somewhat matted, white hairs. *Corolla* (about three lines long, four and a half across) inferior, subcampanulate, bluish purple, equal to the length of the calyx; *segments* three-nerved, blunt, entire, smooth, paler towards the base, and there, on the inside, somewhat hairy, and each having two over-lapping membranous wings, nectariferous. *Stamens* five, nearly thrice the length of the corolla, connected to its base, and alternating with its segments; *Filaments* straight, distant, tapering, purple, slightly hairy at their origin, every where else smooth; *Anthers* yellow, placed transversely, attached by their middle, bilobular, lobes somewhat crescent-shaped, furrowed in the centre. *Germen* green, ovate, subcompressed, covered with loose, white, simple hairs, unilocular. *Style* erect, subangular, purple, nearly as long as the stamens, bifid at its apex; *Stigmas* two, small, three-angled, green. *Ovules* numerous, attached to each parietal receptacle.

This pretty and perfectly hardy alpine plant was raised at the Royal Botanic Garden, Edinburgh, from seeds collected on the Rocky Mountains, North America, during Captain FRANKLIN's second expedition, by Mr. DRUMMOND. It flowered in the open ground last summer, (1829,) but much more strongly in May, 1830. GRAHAM.

Fig. 1. Flower. 2. Stamen. 3. Part of Corolla and Stamen. 4. Pistil, 5. Section of Germen.—*Magnified.*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W.J.H. delt

Pub by S. Curtis, Walworth Augt 1.1830.

TERMINALIA CATAPPA. BROAD DOWNY-LEAVED TERMINALIA.

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Class and Order.

DECANDRIA MONOGYNIA.

(Nat. Ord.—COMBRETACEÆ. *Br.*)

Generic Character.

Flores abortu sæpe polygami. *Calycis limbus* deciduus, campanulatus, 5-fidus, lobis acutis. *Pet.* o. *Stam.* 10, biserialia, calyce longiora. *Ovarium* biovulatum. *Stylus* filiformis, subacutus. *Drupa* calyce non coronata, sæpius exsucca, indehiscens, 1-sperma. *Semen* amygdaloideum. *Cotyledones* spiraliter convolutæ.—Arbores *aut* frutices *inter tropici.* Folia *alterna, sæpe ad apices ramulorum conferta.* Flores *spicati, spicis racemosis vel paniculatis, in parte spicæ inferiore hermaphroditis, in superiore masculis.* D C.

Specific Character and Synonyms.

TERMINALIA* *Catappa;* foliis obovatis inferne attenuatis basi cordatis obscure biglandulosis subtus nervisque pubescenti-tomentosis.

TERMINALIA Catappa. *Linn. Mant. p.* 128. *Jacq. Ic. Rar. t.* 197. *Willd. Sp. Pl. v.* 4. *p.* 967. *Lam. Dict. v.* 1. *p.* 348. *De Cand. Prod. v.* 3. *p.* 11. *Spreng. Syst. Veget. v.* 2. *p.* 359.

ADAMARAM. *Rheede, Hort. Mal. v.* 4. *p.* 3 *et* 4.

DESCR. This is described by all authors as a very large tree in its native soil, " whose pyramidal form is compared

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* So named from its many terminal branches and the numerous terminal leaves upon those branches.

to that of the Spruce Fir, its top being composed of branches arranged circularly in whorls, and spreading horizontally" (Lam.); or as Dr. Roxburgh observes in his MSS., so as to resemble a dumb-waiter. At Liverpool, the tree which produced our specimens has already attained a height of twenty feet. *Bark* smooth, brown; the young branches clothed with rust-coloured down. *Leaves* collected at the extremities of the branchlets, spreading every way, and horizontally, from six inches to nearly a foot in length, on very short stalks, clothed with rusty-coloured down, obovate or inclining to wedge-shaped, acute at the extremity, attenuated below, the base cordate, where on each side of the midrib, is a gland raised on the upper surface, depressed beneath: the margins are quite entire, except that when very young, they have minute, glandular, deciduous, brown teeth; there too they are clothed with rusty-coloured pubescence, which soon disappears above, except upon the nerve, while beneath they are downy, and the down mostly ferruginous. The midrib sends off several oblique, parallel nerves. *Spikes* axillary, much shorter than the leaves, curved upwards, pubescent. *Flowers* small, but numerous, *sterile* and *fertile* ones on the same spike. *Calyx* pale green, shallow, 5-lobed, the lobes rather spreading; within are ten *stamens*, those opposite the lobes lower down, and each of them with an orange-coloured scale or gland, which is densely villous; the other five higher up in the sinuses of the lobes, and hence appearing longer. *Filaments* white, glabrous. *Anthers* ovate, yellow. *Germen* inferior, linear-oblong, attenuated upwards, slightly hairy.

The *Fruit*, given at Tab. 3004, is drawn from what Mr. Parker and myself consider to be the same species, an inhabitant (native?) of Demerara. Should it be otherwise, it may still serve to illustrate the character of this Genus. It is a dry *drupe*, of an oval or broadly oval or obovate form, compressed and almost winged at the sides and point, invested with a thin, dark brown skin. *Nut* of nearly the same shape, very hard, thick, marked with little spots and hollows, whence proceed the numerous fibres which cover the nut, one-celled. *Seed* attached to the upper end of the cell, brown, inverted, oblongo-acuminated. *Albumen* none. *Embryo* of the same shape as the seed. *Radicle* pointing to the *hilum*: *Cotyledons* large, fleshy, beautifully and spirally convoluted.

I was much gratified by receiving in April of the present year, a flowering branch of the Terminalia *Catappa*, from my friends, the Messrs. SHEPPARDS, raised in the great stove of the Liverpool Botanic Garden; where it has blossomed, I believe, for the first time in this country. Nor can I refer to a good figure of the plant. Those in the Hortus Malabaricus are peculiarly unsatisfactory, while that of JACQUIN gives no idea of the size and beauty of the foliage. An excellent drawing, indeed, sent from Calcutta by Dr. ROXBURGH, exists among the splendid collection in the India House, which I had the opportunity of copying some years ago, and it quite corresponds with our plant, which was raised from seeds sent to Liverpool by Dr. WALLICH. ROXBURGH, in his MSS., states the plant to be a native of the Andaman Isles; RHEEDE of the forests of Malabar: but in regard to many *useful* plants, it is extremely difficult to say where the species is indigenous, and where introduced from other countries. The *var. β, subcordata,* though allowed by DE CANDOLLE to be scarcely different, even as a var., from α, is reckoned by some a native of the Caribbee Islands. The Mauritius again is considered to produce a species distinct from this: but the plant which I have received from that island, from CHARLES TELFAIR, Esq. and Professor BOJER, appears to me to be identical with our T. *Catappa.*

The tree is said to delight in a sandy soil. Its fruit is abundantly eaten, being, according to LAMARCK, served up at the first tables in India. Dr. ROXBURGH compares the flavour of the kernel to that of fine almonds or filberts. An oil, too, is expressed from it, equal to the best olive oil, and which does not become rancid. The wood is white, hard, and useful for a variety of purposes, and the tree itself, on account of its beauty and the shade it yields, is planted about houses, &c. Emulsions are made by the Indians of the fruit, and the leaves mixed with river-water are said to cure the cholic.

Fig. 1. Base of a Leaf to show the Glands. 2. Flower. 3. Scale and Stamen. 4. Stamen. 5, 5. Fruits from Demerara. 6. Fruit, with husk, cut through to show the nut. 7. Seed. 8. Embryo. 9. Section of ditto.—All but fig. 1, 2, 3, 4, 9, more or less *magnified.*

W. J. H. del.

Pub. by S. Curtis Walworth Aug. 1. [illegible]

(3005)

DIDYMOCARPUS REXII. CAPE DIDYMOCARPUS.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—BIGNONIACEÆ.)

Generic Character.

Didymocarpus. *Wallich*. *Cal.* 5-fidus. *Cor.* infundibuliformis, *limbo* 5-lobo, subirregulari, rarius bilabiato. *Stam.* 4, rarissime 5, quorum 2, nunc 4, antherifera. *Caps.* siliquæformis, pseudo-quadrilocularis, bivalvis, hinc dehiscens; dissepimento contrarii lobis valvulis parallelis iis denique æmulis (ideoque fructum bicapsularem mentientibus) margine involuto seminiferis. *Semina* nuda, pendula. *Jack in Linn. Tr. v.* 14. *p.* 32.

Specific Character and Synonyms.

DIDYMOCARPUS [*] *Rexii;* foliis omnibus radicalibus patentibus oblongis crenatis rugosis pubescentibus, scapis bibracteatis unifloris, capsula spiraliter torta.

DIDYMOCARPUS Rexii. *Hook. Ex. Fl. t.* 227. *Lodd. Bot. Cab. t.* 1305.

STREPTOCARPUS Rexii. *Lindl. in Bot. Reg. t.* 1173.

DESCR. Perennial, stemless. *Leaves,* many from the same root, lying prostrate on the ground, from three inches to a span long, oval or more frequently oblong, or almost lingulate, slightly convex on the upper side, wrinkled, downy, bright green, below much paler, and marked with

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[*] So named from διδυμος, *double*, and καρπον, *the fruit*, which has, when ripe, and in the act of bursting, an appearance of being double.

numerous prominent veins. *Scapes,* several from the same root, from a finger's length to a span high, cylindrical, purplish-brown, downy above the middle, bearing two, small, subulate, opposite *bracteas,* single-flowered. *Flower* large, handsome, drooping. *Calyx* five-partite ; segments erect, linear, often recurved at the extremity. *Corolla* infundibuliform, three inches long, the *tube* downy, almost white, the *limb* cut into five unequal, very obtuse lobes, of a delicate pale blue, inclining to purple, the lower lobe having three, the lateral lobes each two, dark purple lines. *Stamens* two, perfect, antheriferous, the spreading, two-lobed *anthers* meeting and apparently connected together, just beneath the stigma : there are besides two pedicellated glands, or abortive stamens. *Germen* linear, attenuated into a short style : *Stigma* capitate, obtuse, divided at the back into two short, transverse, downy lips. *Capsule* siliquiform, terete, spirally twisted, downy, purple, one-celled, two-valved ; each *valve* bearing a central, longitudinal *receptacle,* spreading into two plates, so that the transverse section somewhat resembles the letter T, the plates reflexed at the margin, and there bearing the many minute, oblong, brown *seeds.*

For this, one of the most beautiful inhabitants of our stoves and warm greenhouses, we are indebted to the Royal Gardens of Kew, to which place it was introduced by Mr. Bowie, His Majesty's collector in Southern Africa. Specimens and seeds were gathered in the district of Knysna, upon the estates of George Rex, Esq. after whom its discoverer wished the plant to be named. So abundantly does it produce seed, that new individuals come up as weeds in the neighbouring pots, and a succession of flowers may be obtained at almost every period of the year.

Fig. 1. Capsule, *nat. size.*

W.J.H. delt. [illegible] Walworth Aug [illegible] Swan sc.

CROTALARIA OVALIS. OVAL-LEAVED HAIRY CROTALARIA.

Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. bilabiatus, lab. sup. bi-, infer. 3-fido. *Cor.* vexillum cordatum, magnum, carina falcato-acuminata. *Filamenta* omnia connexa, vagina sæpius superne fissa. *Stylus* lateraliter barbato-pubescens. *Legumen* turgidum, valvis ventricosis inflatis, sæpius polyspermum, pedicellatum.

Specific Character and Synonyms.

CROTALARIA * *ovalis ;* tota molliter hirsuta, diffusa, stipulis acuminatis decurrentibus vel nullis, foliis simplicibus ovalibus subsessilibus, pedunculis elongatis oppositifoliis 4—6-floris, calycibus bibracteolatis vexillo vix brevioribus.

CROTALARIA ovalis. *Pursh, Am. Sept. v. 2. p.* 469. *De Cand. Prodr. v. 2. p.* 125. *Nutt. Gen. Am. v. 2. p.* 94. *Elliott, Sketch, v. 2. p.* 194. *Spreng. Syst. Veget. v. 3. p.* 238.

CROTALARIA sagittalis, γ. ovalifolia. *Mich. Bor. Am. v. 2. p.* 55.

CROTALARIA rotundifolia. *Poir. Encycl. v. 2. p.* 402.

ANONYMOS rotundifolia. *Walt. Carol. n.* 278.

DESCR. *Root* perennial, according to Mr. NUTTALL. *Stems* a foot or more long, green and herbaceous, in our

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* From κροταλον, a kind of Cymbals, used by the ancient Greeks. To the sound of this instrument the noise of the hollow rattling pods of this Genus has been likened.

plant, rounded, and clothed with soft patent hairs, as is every part of the plant except the corolla and fruit: from beneath many of the leaves (but not all) especially from those whose axil bears a peduncle, there is an opposite pair of acuminated decurrent *stipules*, but not by any means forming a continued wing to the stem. *Leaves* remote, simple, very nearly sessile, unequal in size, almost exactly and broadly oval, rather acute, obscurely penni-nerved. *Peduncles* elongated, from three to six-flowered. *Pedicels* curved, bracteated, *bracteas* subulate. *Calyx* distinctly two-lipped, and with two opposite, subulate bracteolæ; deeply bifid in the upper lip into two ovato-lanceolate segments, which are bent back by the reflexed *vexillum;* lower one three-partite, the segments linear-subulate, rather longer than the upper ones, all very hairy. *Corolla* bright yellow. *Vexillum* broadly cordate, retuse, a little longer than the calyx, on a short and broad claw. *Alæ* oblong, obtuse, concave, connivent at the extremity, shorter than the calyx. *Carina* concealed within the alæ, acuminated, a little twisted at the point, pale yellow. *Stamen* with the tube cleft above. *Germen* lanceolate. *Style* long, a little hairy on the upper side. *Legume* (immature) obovato-cylindrical, inflated, tipped with the long style. *Seeds* or *ovules* very numerous.

Raised in the stove of the Glasgow Botanic Garden from Mexican seeds, and flowering in the month of April, 1830. It appears so entirely to accord with the C. *ovalis* of Pursh and Nuttall, that I can scarcely entertain a doubt of its being that plant: hence it is also a native of Carolina and Georgia.

Fig. 1. Calyx. 2. The Alæ. 3. Carina. 4. Pistil. 5. Immature Seed-Vessel, *nat. size*. 6. The same, with a portion removed to show the young Seeds.—All, but fig. 5, more or less *magnified.*

W.J.H. del.

Pub. by S. Curtis, Walworth Aug.t 1. 1830.

MORICANDIA ARVENSIS. FIELD MORICANDIA.

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Class and Order.

TETRADYNAMIA SILIQUOSA.

(Nat. Ord.—CRUCIFERÆ.)

Generic Character.

Siliqua tetragona, subanceps. *Semina* biseriata, ovata, parva. *Cotyledones* conduplicatæ. *Calyx* basi bisaccatus. —Flores *purpurascentes*.

Specific Character and Synonyms.

MORICANDIA* *arvensis;* siliquis subtetragonis, foliis caulinis cordato-amplexicaulibus integerrimis.

MORICANDIA arvensis. *De Cand. Syst. Veget. v.* 2. *p.* 626. *Ejusd. Syn. v.* 1. *p.* 221. *Spreng. Syst. Veget. v.* 2. *p.* 914. *Sweet, Br. Fl. Gard. t.* 278. *Reichenb. Ic. Bot. t.* 403.

BRASSICA arvensis. *Linn. Mant. p.* 95.

TURRITIS arvensis. *Br. Hort. Kew. ed.* 2. *v.* 4. *p.* 108.

(β) BRASSICA suffruticosa. *Desf. Atl. v.* 2. *p.* 94.

DESCR. *Root* small, biennial, or probably in the *var.* β, perennial. *Stem* erect, dichotomously branched, one to two feet high, rounded, and, as is the whole plant, perfectly glabrous. *Leaves* rather remote, ovato-cordate, amplexicaul, obtuse, glaucous-green, quite entire, with several spreading, short, pale nerves, branching off from the midrib. *Flowers* large, handsome, in a terminal, lax, raceme. *Bracteas* none. *Pedicels* rather long, slender. *Calyx* erect, almost cylindrical, of four leaflets, of which two are broader, opposite, remarkably saccate at the base, the other two opposite ones are exceedingly narrow, especially at the base, and not in the least saccate; all of them purplish-green. *Petals* equal, the *limb* obovate, obtuse, or retuse, pale purple, beautifully and delicately veined, deep purple at the base; the *claw* long, linear, slender, pale. *Stamens* scarcely longer than the calyx: four longer ones with broader filaments. *Anthers* oblong, broader at the base, yellow. *Pistil* shorter than the stamens. *Fruit:* a *siliqua*, three to five inches long, slender, tetragonal, the angles ribbed, with rather a long beak, and a small, emarginate *stigma*. *Seeds* small, in two rows, oblongo-obovate, pale brown, scarcely winged or margined. *Cotyledons* folded, so as to represent when cut through transversely the letter V; and to the face of the inner one the *radicle* is applied.

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* In honor of STEPHEN MORICAND, an Italian Botanist and author of Flora Veneta.

The Glasgow Botanic Garden is indebted for the possession of this plant to Messrs. YOUNG of Epsom, whose choice collection of plants is only equalled by the liberality with which they distribute them wherever they can be of real service to Science, and who may justly be ranked among the first and most zealous cultivators in the kingdom. Although introduced, as we learn from the Hort. Kew., ever since the year 1739, to Great Britain, it yet exists, we believe, in no collections, but those which derived it from the Messrs. YOUNG; though few plants are more worthy of cultivation.

The colour and size of the flowers are remarkable in this tribe. In England it has been treated, though a native of Barbary, Greece, and the Levant, as a hardy annual. In our less genial climate, we have hitherto given it protection in the greenhouse, where it has flowered in March and April.

Fig. 1. Petal. 2. Calyx, with Stamens and Pistil. 3. A longer, and 4, a shorter Stamen. 5. Pod. 6. Portion of ditto, 7. Seed. 8. Section of ditto. —All more or less *magnified*.

W.J.H. del.

Pub by S Curtis Walworth Augᵗ 1 1830.

RIBES CEREUM. WAXY CURRANT.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—GROSSULARIEÆ.)

Generic Character.

Cal. 5-lobus, laciniis minus coloratis. *Pet.* 5, parva, albida, lutea vel rubra. *Stam.* 5, rarissime 6, filamentis liberis. *Styli* 1, 2, 3, 4-fida. *Bacca* unilocularis, receptaculis lateralibus. *Semina* arillata (an in omnibus?) oblonga, compressa. *D C.*

Specific Character and Synonyms.

RIBES* *cereum;* inerme, foliis cordatis lobatis serratis glanduloso-pubescentibus glabris glaucis superne alboglandulosis, racemis pendulis, floribus paucis subsessilibus cylindraceo-subangulatis, bracteis ovatis appressis dentato-serratis.

RIBES cereum. *Douglas in Herb. Hort. Soc. Bot. Reg. t.* 1263.

DESCR. " A much branched, compact, twiggy *shrub,* four to six feet high in its native climate." DOUGLAS MSS. *Stems* clothed with a greyish-brown *bark,* when young slightly downy, partially coated with a resinous or waxy substance and glandular, when old, cracking and peeling off. *Leaves* small, in my living specimens not at all downy, petioled, five-lobed, the lobes rounded, serrated, glaucous-green, studded on the upper side with white glands, or very minute warts, perforated in the centre, from which a waxy

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* The name of an acid plant, antiently applied to the *Rheum Ribes.*

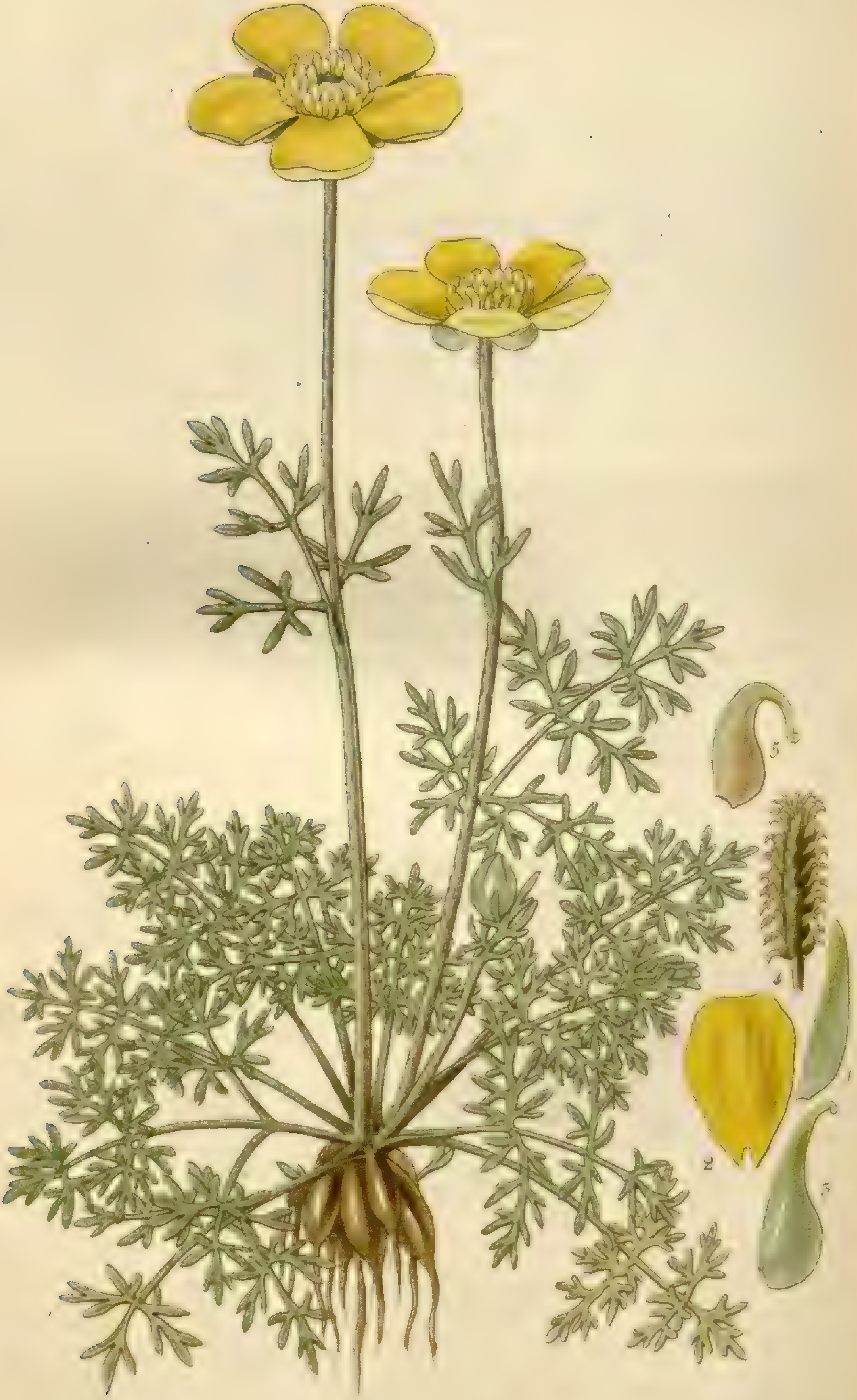
or resinous substance exudes, partially covering the foliage. *Racemes* about as long as the leaves, pendulous, pubescenti-glandulose, as are the bracteas and *flowers:* these latter are few, three to five (DOUGLAS), nearly sessile, and collected into a sort of head at the extremity of the peduncle. *Bractea* large, ovate, concave, dentato-serrate at the extremity, much longer than the germen, and quite concealing the lower part of the flower. *Calyx* cylindrical, with five obtuse angles corresponding with the five small, recurved segments, pale yellow-green, almost white. *Petals* each a small white scale, scarcely protruded above the tube. *Stamens* 5, inserted above the middle of the tube of the calyx. *Anthers* very small, yellow. *Germen* globose, subdepressed, green, glabrous. *Style* as long as the tube. *Stigma* 2-lobed. " *Berries* smooth, scarlet, glossy." (DOUGLAS.)

Introduced by Mr. DAVID DOUGLAS to the Horticultural Society of London, (to whose liberality our Glasgow Botanic Garden is indebted for the plant,) having been discovered by him growing abundantly on the Columbia and its Southern tributary streams, from the Great Falls to the Rocky Mountains, delighting in light gravelly or sandy soils. It does not appear that the fruit is particularly agreeable.

It is perfectly hardy, and flowers in April and May.

Fig. 1. Flower and Bractea. 2. Pistil. 3. Stamen. 4. Petal. 5. Portion of a Leaf, with its Glands. 6. One of the Glands.—All more or less *magnified.*

3009.



W. J. H. del.

Pub. by S. Curtis, Walworth Augt 1 1830.

RANUNCULUS MILLEFOLIATUS. MILFOIL-LEAVED CROWFOOT.

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Class and Order.

POLYANDRIA POLYGYNIA.

(Nat. Ord.—RANUNCULACEÆ.)

Generic Character.

Cal. 5-sepalus, sepalis basi non solutis, deciduis. *Pet.* 5, rarius 10, intus basi squamula foveolari nectarifera instructa. *Stam.* ovariaque plurima. *Cariopsides* ovatæ, subcompressæ, in mucronem aut cornu semine vix longiores desinentes, læves, striatæ aut tuberculatæ, in capitulum globosum cylindraceumve dispositæ. *D C.*

Specific Character and Synonyms.

RANUNCULUS *millefoliatus ;* carpellis lævibus compressis in spicam oblongam digestis, stylis uncinatis, foliis decompositis multifidis glabris lobis lineari - oblongis acutis, caule parce folioso adpresse villoso 1-floro, calyce adpresso, radice grumoso.

RANUNCULUS millefoliatus. *Vahl, Symb. Bot. v. 2. p.* 63. *t.* 37. *Desf. Atl. v.* 1. *p.* 441. *t.* 116. *Willd. Sp. Pl. v.* 2. *p.* 1328. " *Sm. Fl. Græc. t.* 521." *De Cand. Syst. Veget. v.* 1. *p.* 266. *Ejusd. Prodr. v.* 1. *p.* 27. *Spreng. Syst. Veget. v.* 2. *p.* 647. *Ten. Prodr. Fl. Neap. Suppl.* 3. *p.* 377.

DESCR. *Root* formed of a cluster of oblong-elliptical *tubers*, generally terminated by a fibre, and mixed with fibres. *Leaves* mostly radical, on long stalks, multifid; their primary and secondary divisions opposite and rather remote, the rest mostly alternate, the segments linear-oblong, acute, quite glabrous. Those of the stem one to three, gradually smaller upwards, sessile, less compound, with more linear segments. *Stem* and the terminal solitary *peduncle* erect, with close-pressed hairs, single-flowered. *Flowers* large, bright yellow. *Calyx* of five ovato-lanceolate, rather acute, glabrous, green leaves, the margin yellowish, appressed to the corolla. *Petals* five, spreading, obovato-cordate, the pore at the claws covered by a small scale. *Pistils* collected into an oblong, crowded spike: *styles* attenuated, recurved at the extremity; in fruit, these are recurved for nearly their whole length.

RANUNCULUS *millefoliatus* is an inhabitant of the northern parts of Africa, especially the mountains about Tunis, of Greece, Sicily, and the Neapolitan dominions. I have specimens gathered by VAHL, in Barbary, others collected by WILLIAM SWAINSON, Esq. in Sicily, and Italian ones from Professor TENORE; but I am not aware that it has been known to our cultivators till the latter Botanist sent seeds to the Glasgow Garden about two years ago. The plant has succeeded well, is perennial, and aided by the shelter of a frame in winter, it produces its large and handsome blossoms, which continue long in perfection, in the month of April.

Fig. 1. Calyx-leaf. 2. Petal. 3. Pistil. 4. Spike of Carpels scarcely ripe *(nat. size)*. 5. Single Carpel or Capsule.—All but fig. 4, more or less *magnified.*

F.T. del.

Pub by S. Curtis Walworth. Augt 1 1837

(3010)

PHRYNIUM COLORATUM. COLOURED-SPIKED PHRYNIUM.

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Class and Order.

MONANDRIA MONOGYNIA.

(Nat. Ord.—CANNEÆ.)

Generic Character.

Cal. 3-phyllus, coloratus. *Cor.* tubo elongato, limbo 5-partito, lacinia inferiori (seu labello) difformi. *Anthera* lateralis simplex. *Stylus* corolla adnatus, superne liberus, incurvatus, abruptus. *Stigma* obliquum. *Germen* inferum.

Specific Character.

PHRYNIUM * *coloratum;* scapo radicali aphyllo medium versus bractea longa vaginata, capitulo subgloboso laxo, bracteis ovato-acuminatis coloratis, foliis oblongo-lanceolatis.

DESCR. *Root* horizontal, thick, fleshy, and fibrous. *Leaves* eight or nine inches long, oblongo-lanceolate, glabrous, green, glossy above, acuminate, with the costa or main-rib not exactly in the centre, throwing out numerous, rather closely placed, lateral nerves, the margins at the base meeting at the upper side of the costa. *Petiole* a foot long, with exceedingly long sheathing bases. *Scape* erect, rigid, terete, a foot and a half high, rising from the root, remote from the leaves, leafless, but having a joint below the middle, where is inserted a very long, dark purple, sheathing *bractea:* for the greater part of the length the

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* From Φρυνιον, or φρυνανον, a kind of dry or hard plant—" VIRGULTUM *aridum.*" ROSCOE.

colour is green, but red at the extremity. *Head* somewhat globose, lax, with numerous large, ovato-lanceolate, acuminate, concave, red *bracteas,* within each of which is a sessile cluster of several bracteated, rather bright orange-coloured *flowers,* of which cluster, two are generally open at the same time. *Bracteas,* as well as the whole flower, orange-coloured. *Calyx,* or outer perianth, of three erect, convolute, carinated leaves, as long as the tube of the corolla. *Corolla* tubular for the greater part of its length: *limb* decurved, double, the outer, of three nearly equal, concave, acute, deep orange-coloured segments, the inner of two paler ones, the upper larger, and in part embracing with its incurved sides the lower one or *lip,* which is irregular, laciniated, with one of the laciniæ obliquely curved. To the inner side of the lower lip, and decurrent with the tube, is fixed the *style,* which is broad, flat, linear, remarkably curved in its upper or free part, truncate at the extremity: *stigma* oblique. *Filament* of the stamen broad, truncate, inserted on one side between the upper and lower inner petal. *Germen* inferior, subglobose.

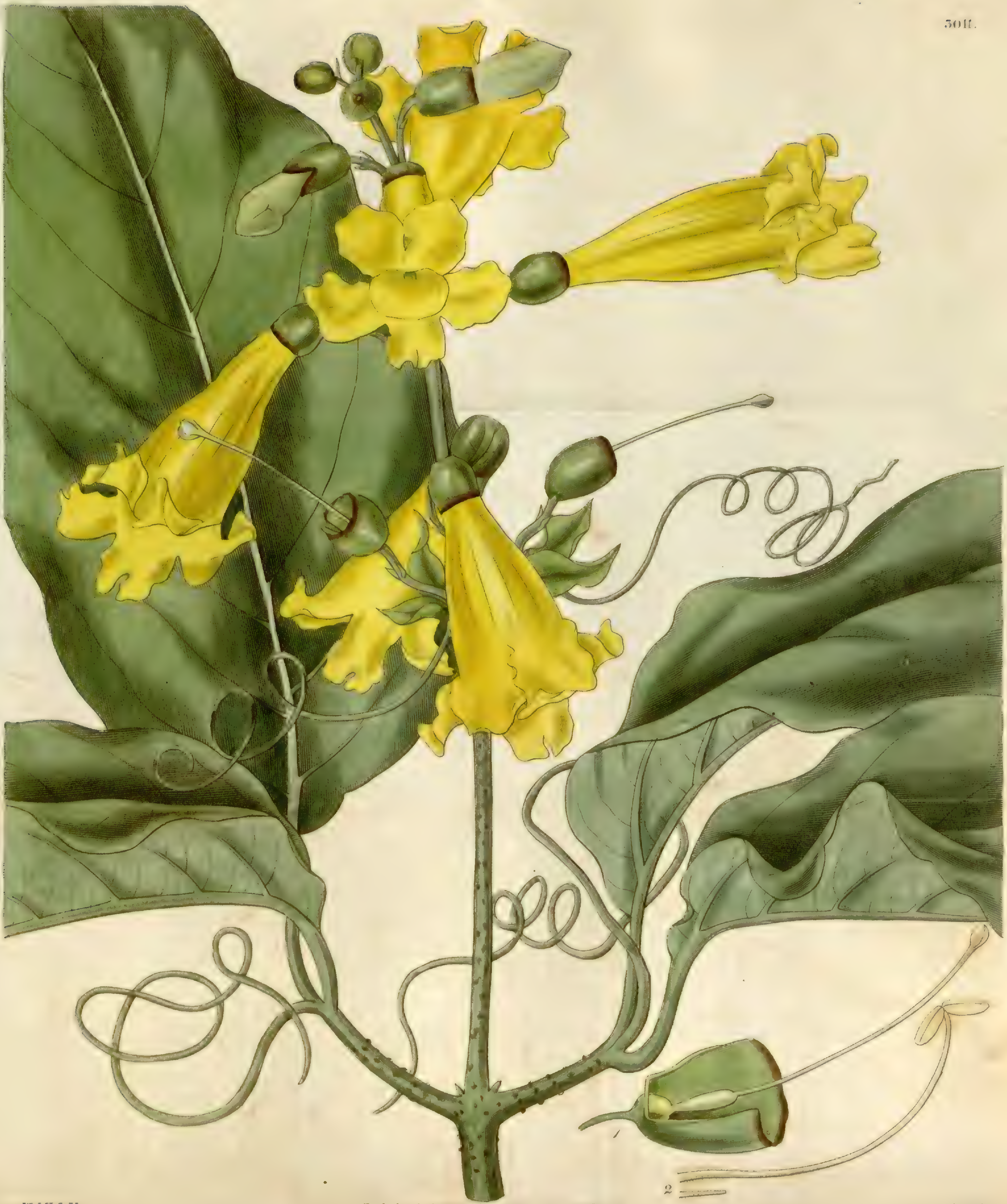
For this handsome and graceful species of PHRYNIUM our country is indebted to RICHARD HARRISON, Esq. who introduced it from Brazil. The plant from which the accompanying drawing was taken, had flowered at Wentworth House, whence it was sent by the able Botanic gardener there, to the Messrs. SHEPPARDS of Liverpool, who, judging from the flowering spike that the species was hitherto undescribed, at once obligingly forwarded it to me.

I here follow the amiable and learned Mr. ROSCOE in combining CALATHEA with PHRYNIUM; no satisfactory characters, that I am aware of, having been yet pointed out, by which the two genera are to be distinguished.

P. *coloratum* flowered in Lord MILTON's stove in the month of April, 1830.

Fig. 1. Flower. 2. The same; the Calyx and the three outer segments of the Corolla being removed. 3. Portion of the inner Limb of the Corolla, laid open to show the Stamen, and the free portion of the Style.—*Magnified.*

3011.



W. J. H. delt.   Pub by S. Curtis, Walworth. Sepr. 1 1830.   Swan Sc

BIGNONIA GRANDIFOLIA. GIGANTIC-LEAVED TRUMPET-FLOWER.

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Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—BIGNONIACEÆ.)

Generic Character.

Cal. campanulatus, integerrimus, repandus vel subdentatus. *Cor.* campanulata, limbo bilabiato, 5-lobo. *Filamentum* 5 sterile. *Stigma* bilamellatum. *Capsula* siliquæformis, bilocularis, dissepimento valvis parallelo. *Semina* transversa, biseriata, membranaceo-alata. *Spreng.*

Specific Character and Synonyms.

BIGNONIA *grandifolia;* foliis conjugatis cirrhosis, foliolis oblongis ovalibusve undulatis glaberrimis utrinque acutis, racemo terminali, pedicellis bi-bracteolatis unifloris vel trifloris, pedunculis petiolis ramulisque punctato-scabris.

BIGNONIA grandiflora. "*Jacq. Hort. Schoen. v. 3. p.* 19. *t.* 287." *Willd. Sp. Pl. v.* 3. *p.* 296. *Bot. Reg. t.* 418. *Spreng. Syst. Veget. v.* 2. *p.* 830.

DESCR. *Stems* climbing to a very great height, branched; branches rounded, glabrous, brownish, the younger ones green, rough with small warts or oblong raised points. *Leaves* opposite, conjugate, stalked, as are the leaflets, main petioles rough like the stem, and bearing long, simple tendrils at the extremity between the petioles of the leaflets. *Leaflets* from six or eight inches to a foot or a foot and a half long, oblong or oval, waved, acute at each extremity, strongly nerved, quite entire and glabrous, glossy above and bright green, paler and with prominent veins beneath.

Raceme large, handsome, from between a pair of leaves, and frequently bearing a small pair of leaves upon the peduncle. *Peduncles* flexuose, opposite, about an inch long, single-flowered, and with two bracteas in our plant, three-flowered according to Jacquin. *Calyx* a short, oval tube, coriaceous, glabrous, green, brownish at the edge, entire at the margin, but often cleft on one side. *Corolla* three inches or more long, with a rather compressed *tube*, swollen upwards, its *limb* cleft into five, nearly equal, spreading, very wavy, roundish segments, the lowermost one bifid: its color is a full deep and bright yellow, glabrous except at the base within, at the mouth marked with reddish lines in dots. *Stamens* pale yellow. *Filaments*, and even the small sterile one, glanduloso-hirsute at the base. *Anthers* of two oblong, divaricated, one-celled lobes. *Germen* oblong, attenuated at the base, placed on a large, globose, fleshy, yellow-green gland. *Style* filiform, shorter than the corolla. *Stigma* bilamellate.

I am indebted to my friend J. T. Mackay, Esq., of the Dublin College Botanic Garden, for the specimen here figured of this most desirable inmate of the stove, and which is, I believe, still of rare occurrence in our collections. Its foliage and flowers are amongst the handsomest of the family of the climbing plants: but with a view to its blossoming in perfection, a great deal of space must be allowed to it. It flowered in April.

Fig. 1. Calyx, laid open to show the Germen and Gland. 2. A perfect and the sterile Filament :—slightly *magnified*.

3012.

W J H del. . Pub by S. Curtis, Walworth, Sept 1 1830 Sw. sc.

LOBELIA KRAUSSII. DOMINICA LOBELIA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—CAMPANULACEÆ. Sect. II. *Br.*)

Generic Character.

Cal. 5-fidus. *Cor.* 1-petala, irregularis. *Antheræ* coherentes. *Caps.* infera, bi- seu trilocularis.

Specific Character and Synonym.

LOBELIA* *Kraussii;* caule herbaceo glabro erecto ramoso, foliis lanceolatis subsessilibus decurrentibus argute serratis utrinque nudis, pedunculis axillaribus solitariis foliis longioribus, laciniis calycinis subulatis subdentatis patentibus corollaque glabris.

LOBELIA Kraussii. *Graham in Ed. New Phil. Journ.*

DESCR. *Root* perennial. *Stem* a foot to a foot and a half high, succulent, green, glabrous, angular from decurrent leaves, erect, branched. *Leaves* (four and a half inches long, three-fourths of an inch broad,) numerous, scattered, lanceolate, glabrous on both sides, shining, bright green above, paler below, sharply serrated, the serratures largest at the base, subsessile, decurrent, much smaller towards the top of the stem, slightly bullate, strongly veined, veins prominent on both sides. *Peduncles* three inches long, axillary, solitary, numerous towards the top of the stem, one-flowered, nearly twice the length of the diminished leaves, from the axils of which they spring, smooth, compressed, and having two, subopposite, bristle-

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* Named in compliment to MATTHEW LOBEL, an English Botanist, physician to our first JAMES.

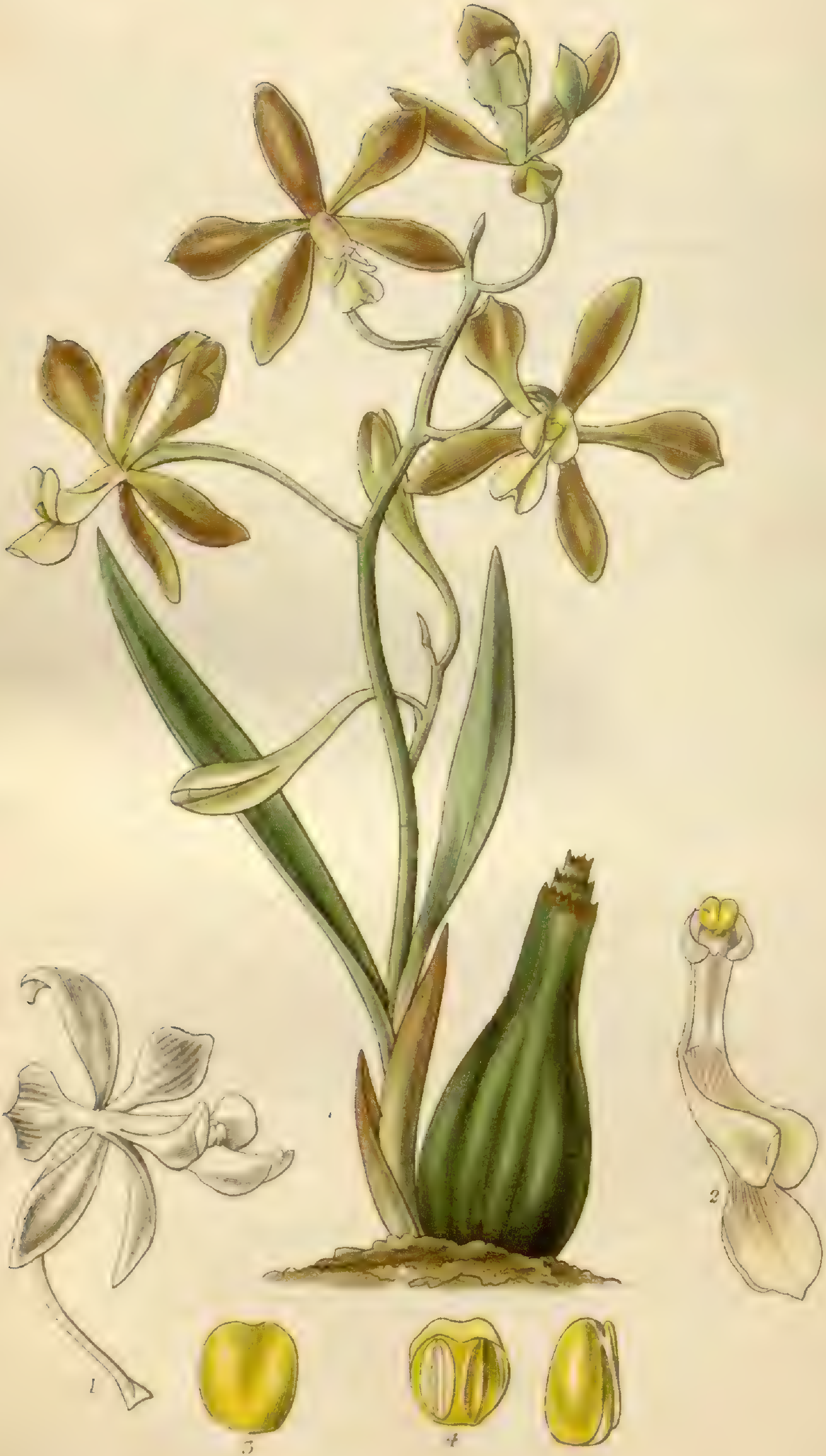
shaped, smooth, decurrent *bracteas* near the middle, below which they are bright green, paler in the centre, and red towards the top. *Calyx* red, glabrous, persisting, of five rather unequal, subulate segments, (five to seven lines long,) spreading at right angles to the peduncles, and each with a very few obscure teeth. *Corolla* one inch long, red, marcescent; *tube* compressed, cleft to its base along the upper side, but spreading little; *limb* five-parted, segments linear, subulate, with the apices deflexed, the two upper ones the broadest, the three others turned downwards, and that in the centre rather the smallest. *Stamens* shorter than the corolla, marcescent; *filaments* white, smooth, forming a half cylinder, and united, except towards the base, where only they are free and pubescent; *anthers* lead-coloured, terminated by a dense, white beard; *pollen* abundant, whitish. *Stigma* bilabiate, segments revolute, rounded, glandular, slightly hairy behind. *Style* as long as the stamens, yellowish, somewhat clavate, continued downwards into the dissepiment, marcescent. *Germen* glabrous, bilocular, with a conical, empty beak, which afterwards falls down, rising above the calyx, otherwise inferior. *Ovules* numerous, attached to a central *receptacle,* the transverse section of which is kidney-shaped in each loculament. *Seeds* minute, pale brown, lenticular, hollow on one side; when seen under a microscope appearing dotted and shining.

The seeds of this plant were obligingly communicated to me from Dominica, in September, 1828, by my valuable correspondent, Dr. Krauss; in acknowledgment of whose kindness, I have named the species. It first flowered in the stove of the Edinburgh Botanic Garden, in January and February last, and is ornamental.

In the arrangement of the species, Lobelia *Kraussii* must stand near L. *persicifolia* of Lamarck. Graham.

Fig. 1. Flower. 2. Stamens and protruded Stigma:—*magnified.*

3013.



H. del^t. Pub by S Curtis. Walworth Sep^r 1.1830. Swan sc

(3013)

ENCYCLIA PATENS. SPREADING-FLOWERED ENCYCLIA.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Perianthium subconnivens vel patens, laciniis subæqualibus. *Columna* libera, aptera, nunc superne bidentata, *labello* trilobo, ecalcarato, magis minusve circumvoluta. *Anthera* terminalis, 4-locularis. *Massæ pollinis* 4, per pares filo elastico in ipsis reflexo connexæ.

Specific Character.

ENCYCLIA * *patens;* perianthii laciniis patentibus duabus interioribus spathulatis, labello profunde trifido, lobo medio obovato integro.

DESCR. *Bulb* ovate, attenuated, furrowed; in the present instance destitute of leaves at the summit, whence they have fallen away. From the bulb a new plant rises, having two long, sheathing scales at its base, and bearing two linear-lanceolate, rather thick, coriaceous, small, nerveless *leaves*. *Scape* from the centre of these leaves, supporting a panicle of six to eight moderately sized flowers. *Perianth* patent, dingy yellow-green, within marked with purplish-brown streaks: the three outer segments are lanceolate, the two inner spathulate and acute; their texture is rather thick and fleshy. *Lip* standing forward, longer than the segments of the perianth, narrow at the base, pale yellow,

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* See folio 2831.

streaked with red lines within, cut into three deep lobes, of which the lateral ones include the column by curving upwards, the intermediate lobe is the largest, obovate, entire. *Column* semicylindrical, white, with two incurved teeth, one on each side above. *Anther* hemisphærical, of two double cells, bearing yellow, waxy, *pollen-masses*. *Germen* clavate, tapering downwards into a pedicel.

This, a second species of the new Genus Encyclia, was obligingly communicated, and accompanied with a sketch, by Mrs. Arnold Harrison, from her rich collection at Aigburgh; with the information, that it was gathered in woods above Rio de Janeiro by Mr. Warr, and that it imparted a delightful fragrance. The general structure of the flowers is so similar to those of the Encyclia *viridiflora* (t. 2831,) communicated by the same lady, and from the same country, that I have no hesitation in referring it to that Genus: the character of which, I find it consequently necessary in some degree to correct.

Fig. 1. Flower. 2. Labellum, and the Column forced up from the Labellum. 3, 4. Anther-case. 5. Double Pollen-masses, from one of the double Cells of the Anther :—*Magnified.*

3014.

W. J. H. del^{t}

Pub by S Curtis Walworth Sep^{r} 1 1830.

Sw[illegible]

(3014)

VANGUERIA VELUTINA. VELVETY VANGUERIA.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—RUBIACEÆ.)

Generic Character.

Cal. 5-dentatus, dentibus patentibus. *Cor.* campanulata, limbo patente, fauce pilosa. *Stam.* tubo inserta, antheris prominentibus. *Stigma* capitatum. "*Bacca* (non coronata) 4—5-locularis, 4—5-sperma. *Sem.* forma *Amygdalæ.*"

Specific Character.

VANGUERIA * *velutina;* ubique velutina, foliis cordato-ovatis.

DESCR. A *shrub,* growing in the stove of the Liverpool Botanic Garden to a height of three feet, clothed on the stem, leaves, calyx, and exterior of the corolla, with a soft, velvety tomentum. *Leaves* large, opposite, nerved, shortly petiolate, cordato-ovate, rather acute, entire, much waved, most downy beneath. *Stipules* opposite, from between the leaves, large, appressed, broadly oval, obtuse, with a long, erect, soft point, very downy. *Flowers* axillary in the lower leaves which soon fall off as the flowers advance to perfection, in short, dense cymes, of a pale, yellowish-green colour. *Calyx* of five linear-lanceolate, spreading, or often reflexed teeth. *Corolla* between campanulate and infundibuliform, the *tube* broad, the *limb* in five ovate, spreading segments, the *faux* almost closed with long, erect hairs. *Stamens* inserted just within the tube: *Filaments* short, glabrous: *Anthers* ovate, two-celled, yellow, exserted beyond the mouth of the corolla. *Pistil*: *Germen* inferior, roundish, downy; at its mouth, within the calyx, is a circular, yellow gland or ring: *Style* subulate, fleshy: *Stigma* extinguisher-shaped, blunt, large.

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* The *Voa-vanguier* of the people of Madagascar.

The present plant boasts of little beauty, but is deserving of a figure, as a new species of a Genus, whereof only two have been hitherto described: namely, the VANGUERIA *edulis* of VAHL, an esculent-fruited plant, native of Madagascar, and V. *spinosa* of ROXBURGH, an inhabitant of Bengal and China. The present is, like the former, a native of Madagascar, and was received thence at the Liverpool Botanic Garden, where it has blossomed in May of the present year, 1830. It is at once distinguished from V. *edulis* by its leaves being broad and cordate at the base, and by the beautifully velvety foliage.

Fig. 1. Flower. 2. Calyx and Pistil. 3. Stamen. 4. Section of the Germen:—*magnified.*

3015.

W. J. H. del.^t

Pub by S. Curtis Walworth Sep.^t 1. 1830

Swan Sc.

(3015)

CEROPEGIA ELEGANS. BEAUTIFUL CEROPEGIA.

Class and Order.

PENTANDRIA DIGYNIA.

(Nat. Ord.—ASCLEPIADEÆ. *Br.*)

Generic Character.

Corona staminea exterior abbreviata, 5-loba; interior 5-phylla, foliolis ligularibus indivisis. *Massæ pollinis* basi affixæ, marginibus simplicibus. *Stigma* muticum. *Folliculi* cylindracei, læves. *Semina* comosa. *Br.*

Specific Character and Synonym.

CEROPEGIA[*] *elegans;* volubilis lævis, radice fibrosâ, foliis oblongis acutis, pedunculis axillaribus 1- vel 2-floris, corollæ tubo clavato incurvo basi inflato-ventricoso, limbo hemisphærico, laciniis ligulatis longè ciliatis; lobis coronæ stamineæ exterioris profundè 2-partitis. *Wall. MSS.*

CEROPEGIA elegans. *Wall. MSS.*

DESCR. The whole plant smooth, somewhat fleshy, climbing to a considerable extent. *Root* consisting of many filiform fibres, without any tubers. *Branches* numerous, long, and slender. *Leaves* opposite, remote, spreading, oblong acute, or ending in a short acumen, about three inches long, dark-green and shining above, pallid underneath, with elevated ribs, and capillary, distant nerves, which unite near the margins by means of arcuate veins;

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[*] From κηρος, *wax*, and πηγη, *a fountain*, in allusion to the delicate, waxy umbels of some species.

supported on cylindrical, curved, furrowed footstalks, which conceal within their axils a few of the minute, subulate, fleshy bodies, which belong to the family of ASCLEPIADEÆ. *Peduncles* axillary, solitary, thickish, round, shorter than the petioles, one or two-flowered. *Flowers* large, inodorous, of a purple colour, speckled with green, on slender, half-inch long, partial *peduncles,* each of which has at its base one or two small, linear, purplish bracteas. *Corolla* deeply five-cleft, closely pressed to the enlarged base of the corolla; *laciniæ* spreading, linear-subulate. *Corolla* nearly an inch and a half long; *tube* club-shaped, curved, much swelled and ventricose at the base, widening again at the upper end into the large, round, slightly depressed, five-cleft *border;* laciniæ tongue-shaped, acute, bent inwardly, and connected by their apices, having between them large and wide interstices; their sides are bent backwards so as to become contiguous, and the margins furnished with a row of long, black, shining, straight, loose and vacillating hairs; the inside of the border is dark purple. *Organs of Fructification* very small, concealed in the bottom of the corolla, and surrounded with a double corona; the outer one five-cleft, or, rather, ten-cleft, in consequence of the five lobes, which are linear-subulate, and converge over the inner corona, being deeply two-cleft; inner corona five-cleft, lobes subulate, rather obtuse, undivided, opposite to those of the outer corona. *Anthers* fleshy, clavate, naked, bilocular; the cells being large, membrane-margined. *Pollen-masses* ovate, obtuse, erect, connected in pairs by means of a very short pedicel to the apex of a small, brown, sulcate corpusculum. *Stigma* indistinctly five-cornered, depressed, with an obscurely two-lobed, central prominence. WALL. MSS.

The Company's Botanic Garden of Calcutta is indebted to the Venerable Archdeacon HAWTAYNE of Bombay for this ornamental plant, which is one of the most elegant of the Genus to which it belongs. It was discovered on the Nilghiry range, and forwarded to the garden in 1824; where it blossoms profusely in the beginning of every year. A living plant was brought to England by Dr. WALLICH, in 1828, which was presented by the Hon. Court of Directors of the East India Company to His Majesty's garden at Kew, where it is now in full flower.

Fig. 1. Calyx and Pistil. 2. The double Corona Staminea. 3. The inner ditto. 4. Portion of the outer and inner Crown, with two Pollen-masses, and the angular Stigma. 5. Pollen-masses. 6. Pistils.—*Magnified.*

301

W.J.H. del.ᵗ

Pub by S. Curtis. Walworth. Sep.ʳ 1.1830.

Swan Sc

BRACHYSTELMA CRISPUM. WAVED-LEAVED BRACHYSTELMA.

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Class and Order.

PENTANDRIA DIGYNIA.

(Nat. Ord.—ASCLEPIADEÆ.)

Generic Character.

Corolla campanulata, sinubus angulatis. *Columna* inclusa. *Corona* monophylla, 5-fida; lobis antheris oppositis, dorso simplicibus. *Antheræ* absque membrana apiculari. *Massæ pollinis* erectæ, basi insertæ. *Brown MSS.*

Specific Character and Synonym.

BRACHYSTELMA* *crispum*; foliis elliptico-lanceolatis, corollæ laciniis tubo duplo longioribus, pedunculis sæpius aggregatis.

BRACHYSTELMA crispum. *Graham, Descr. of Rare Plants, in Edin. Phil. Journ.*

DESCR. *Tuber* four inches in diameter, round, flattened, slightly depressed, having in the centre a rugged crown or neck, divided at top and permanent, about half or three quarters of an inch high, from which the stems spring when the plant begins to vegetate. *Stems* several, slightly flattened, ascending, much branched, forming a dense, round tuft, (in the specimen described six inches high and ten inches broad,) covered with short, glandular pubescence. *Leaves* opposite, decussating, elliptico-lanceolate, dark green above, paler beneath, covered on both sides with

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* From βραχυς, *short,* and στελμα, *a crown,* in allusion to the short *corona* of the flower.

glandular pubescence, crisped, on short petioles, with a strong middle rib, and a few veins prominent beneath: at the flowers, the pairs occasionally approach, so as to give the appearance of a four-leaved verticel. *Peduncles* nearly three-fourths of an inch long, simple, rarely solitary, generally aggregated, situated on the side of the stem, between the leaves, two or more frequently agglutinated together in the luxuriant specimen described. *Bracteas* small, awl-shaped, at the base of the peduncles. *Calyx* small, five-parted, pubescent, segments awl-shaped, and very much resembling the bracteas. *Corolla* monopetalous, pubescent within, naked without; *limb* five-parted, plicate, occasionally twisted, forming to the bud an angular, blunt beak, about an inch long, of the same colour as the back of the leaves, segments afterwards spreading wide, their edges revolute, upper surface dark olive-green, *faux* devoid of pubescence, yellow, especially within-side, crowded with deep purplish-brown, oblong, transverse spots, which on the outside are fewer and more rounded; *tube* campanulate; *crown* deep-purple, included, monophyllous, with five teeth, which are connivent over the *stigma;* there is an emarginate, erect border on the outside of each, and between them five pits, over which are situated the truncated *stamens,* each having two distinct *pollen-masses,* and a depending, central, double beak. *Germen* of two smooth, green, conical *follicles;* each with many *ovules* attached to their inner side. *Stigma* common to both follicles, large, flat, white.

Several bulbs of this plant were collected in Southern Africa, by Mr. Bowie, and sent, with many others, in the spring of 1829, to Mr. Neill, in whose stove at Canonmills they flowered in May, 1830. The species approaches Brachystelma *spathulatum,* Bot. Reg. t. 1113, but it seems to me evidently distinct. Mr. Neill has received another plant, which has not yet blossomed, from the same quarter, of which the leaves are flat and elliptico-spathulate, while the bulb is somewhat elevated in the centre. It seems probable that it will prove to be the B. *spathulatum.* In the natural groupe of plants to which Brachystelma belongs, there are many fetid species, but I am not acquainted with any whose smell is so decidedly stercoraceous as the present individual. Graham.

W.H.F. del. Pub. by S. Curtis, Glazenwood, Essex. Sep. 1 1857. Swan.

(3017)

ANTHERICUM BULBOSUM. BULBOUS-ROOTED LANCASHIRE ASPHODEL.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—ASPHODELEÆ.)

Generic Character.

Perianthium sexpartitum, patens, æquale, deciduum. *Antheræ* versatiles. *Ovarium* loculis polyspermis. *Stylus* filiformis. *Stigma* subpapillosum. *Capsula* subglobosa, 3-locularis, 3-valvis, valvis medio septiferis. *Semina* pauca, angulata, umbilico nudo. *Br.*

Specific Character and Synonyms.

ANTHERICUM* *bulbosum;* bulbo depresso, filamentis declinatis omnibus barbatis. *Br.*
ANTHERICUM bulbosum. *Br. Prodr. Fl. Nov. Holl. p.* 275.
BULBINE australis. *Spreng. Syst. Veget. v.* 2. *p.* 86.

DESCR. *Bulb* in our plant roundish-ovate, somewhat truncate at the top, partly rising above ground, and bearing a few fleshy, short fibres. *Leaves* all radical, white at the base, and surrounded by some lanceolate, sheathing scales, the rest darkish-green, linear, attenuated, semiterete and deeply grooved above, quite glabrous, a foot and more long. *Scape* a foot and a half to two feet and more high, naked, terete, glabrous, bearing a *raceme* of numerous, handsome, bright-yellow *flowers,* which, as the flowers expand, lengthens considerably. The buds are greenish, tipped with purple. *Pedicels* at length patent, almost an

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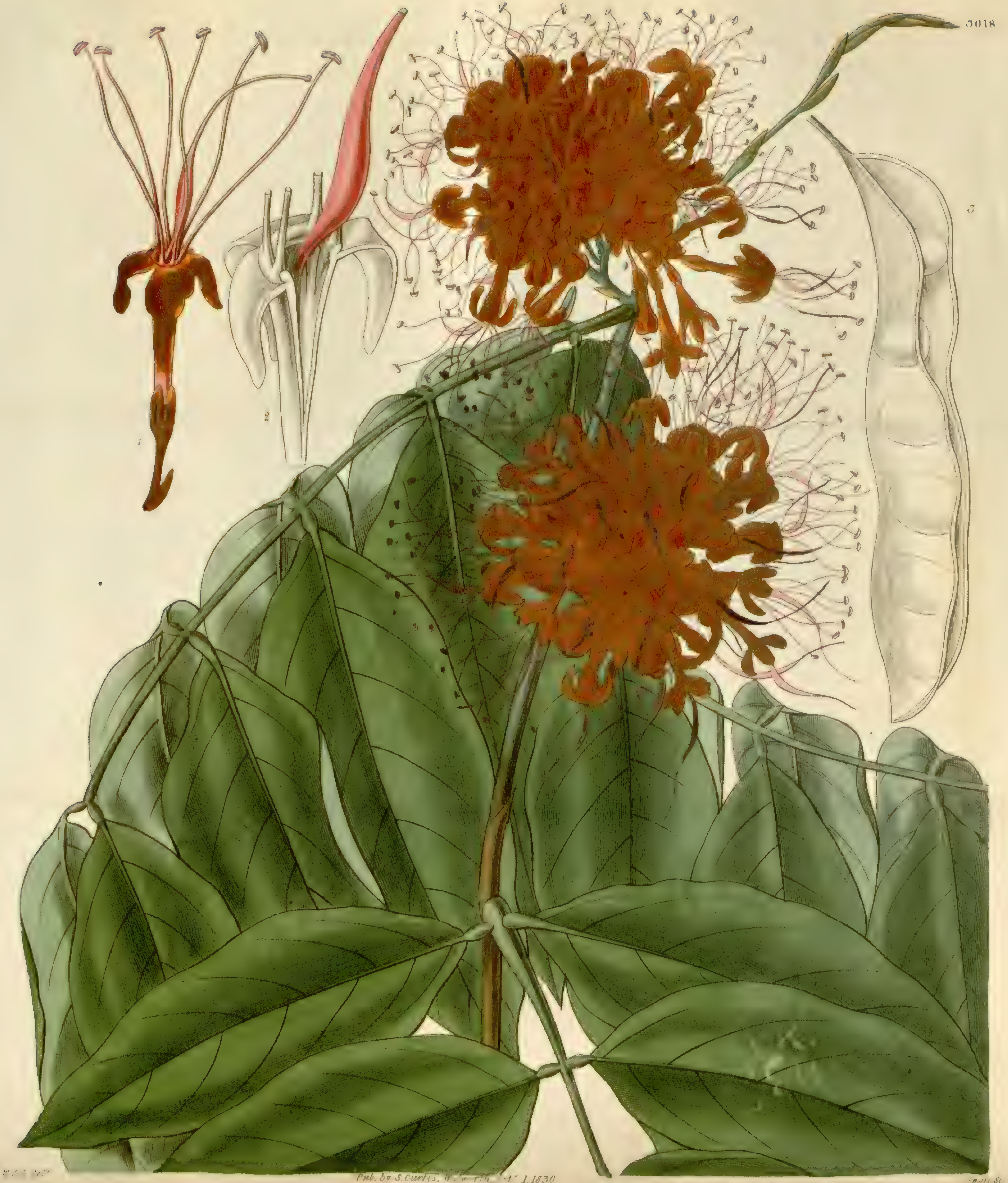
* From ανθερικος, a name given by the Greeks to the stem of the ASPHODEL.

inch long, slender, with a small, subulate *bractea* at the base. *Perianth* patent, in five very deep, narrow, ovate, concave, segments. *Stamens* spreading, about as long as the segments. *Filaments* very hairy, and, especially, the *anthers* at the back and between the two linear lobes, where the hairs are exceedingly long: all yellow. *Germen* small, globose. *Style* declined, subulate, as long as the stamens, almost white.

For this species of ANTHERICUM our Botanic Garden at Glasgow is indebted to Mr. FRASER, the Colonial Botanist at New South Wales, many plants of it having flowered with us during the months of May and June. Only two species of this Genus are yet enumerated as natives of New Holland; of these, one (A. *semibarbatum,* BR.) has fibrous roots and stamens of which the outer only are bearded; the other, (A. *bulbosum,* BR.) has a bulbous root and all the stamens bearded. The latter characters are conspicuous in our plant: but Mr. BROWN further says of his A. *bulbosum,* that it has *depressed* bulbs and declined filaments, characters which do not well accord with the present individual: on which account it may, perhaps, deserve to be considered a new species. Mr. BROWN gives it as a native of Port Jackson.

Fig. 1. Stamen. 2. Pistil :—*magnified.*



W.J.H. del.

Pub. by S. Curtis. W[illegible] 1.1830

Swan Sc.

JONESIA ASOCA. FRAGRANT JONESIA.

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Class and Order.

HEXANDRIA OCTANDRIA.

(Nat. Ord.—LEGUMINOSÆ. DIV. CASSIEÆ.)

Generic Character.

Bracteolæ 2, oppositæ ad basin calycis. *Cal.* coloratus, infundibuliformis, tubo longo clauso carnoso, limbo patente 4-lobo, lobis ovatis. *Pet.* o. *Stam.* 8 (interdum 6, 7—9) ex fauce calycina orta, longe exserta, libera aut ima, basi nonnulla subconcreta. *Ovarium* stipitatum, stipite in parte infer. calycis tubo adnato superne libero. *Stylus* filiformis. *Legumen* 4—8-spermum, compresso-planum, acinaciforme, suturis callosis. *D C.*

Specific Character and Synonyms.

JONESIA* *Asoca;* caule arboreo. *D C.*
JONESIA Asoca. *Roxb. in Asiat. Res. v.* 4. *p.* 853. *Hort. Beng. p.* 27. *De Cand. Prodr. v.* 2. *p.* 487.
JONESIA pinnata. *Willd. Sp. Pl. v.* 2. *p.* 287.
SARACA indica. *Linn. Mant. p.* 98.
SARACA arborescens. *Burm. Fl. Ind. p.* 85. *t.* 25. *f.* 2.
ASJOGAM. *Hort. Mal. v.* 5. *p.* 117. *t.* 59.

DESCR. A *tree* of middling height, much branched, with an erect trunk and a spreading head. *Leaves* alternate, abruptly pinnate, with generally five pairs of opposite, ovato-lanceolate, subcoriaceous, acuminated *leaflets,* shortly petioled, four to six inches long, entire, quite glabrous,

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* So named in honour of the late Sir WILLIAM JONES, a zealous cultivator and patron of Botany, as well as of other branches of Science and of general literature.

somewhat glaucous beneath: the *rachis* terete, swollen at the base, where is a lanceolate, deciduous *stipule*. *Flowers* of a rich orange-red colour, delightfully fragrant, collected into a rounded, compact *panicle*, with many small *bracteæ*, and situated in the axils of the leaves, than which they are much shorter. *Pedicels* short, red. *Bracteæ* two, opposite, oval, red, resembling a calyx, as the calyx, in its rich colour, resembles a *corolla*. This latter is hypocrateriform; its *tube* solid and fleshy, except just at the mouth, cylindrical, or a little enlarged upwards: the *limb* consisting of four spreading, oval, at length reflexed segments. At its mouth is a deep-red, fleshy, annular ring: upon which the *stamens*, mostly six in number, are inserted; two opposite all the segments of the calyx but one. *Filaments* purplish-red, long, flexuose. *Anthers* oblong, inserted by the middle of the back, dark purple. *Cor.* o. *Pistil* on a short stalk, inserted into the mouth of the tube, and on that side where the stamens are wanting: sometimes abortive. *Germen* linear-lanceolate, compressed, reddish, slightly hairy. *Style* long, curved: *Stigma* capitate. The *fruit* I have not seen. I have represented it (reduced) from a drawing in the possession of the Hon. the East India Company. It is described by Dr. Roxburgh, as acinaciform, reticulated, six to ten inches long, and about two inches broad. *Seeds* four to eight, smooth, grey, of the size of a large chestnut.

I was favoured with the specimen here figured of this highly beautiful, fragrant, and interesting plant by the Messrs. Shepherds, from the stove of the Liverpool Garden, whither its seeds had been sent (packed in mould) by the Rev. Dr. Carey of Serampore. So skilful had been the mode of treatment pursued, that it flowered in great perfection when only four feet high. Few could at the first sight of the flower, consider this plant as belonging to the Leguminosæ: the blossoms have a much greater resemblance, both in form and colour, to some species of Ixora; being quite as beautiful, while its foliage is more so.

Roxburgh tells us that the tree is commonly cultivated about Calcutta, but that it is indigenous in the interior; as it is likewise of the Malabar coast and of Java. I have fine specimens from the Mauritius, sent to me by my often-mentioned friend, Mr. Telfair.

Fig. 1. Flower. 2. Section of the upper part, *magnified*. 3. Legume, *reduced*.

Pub. by S. Curtis, Walworth, Octr 1.1830

(3019)

HYDRASTIS CANADENSIS. CANADIAN YELLOW-ROOT.

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Class and Order.

POLYANDRIA POLYGYNIA.

(Nat. Ord.—RANUNCULACEÆ.)

Generic Character.

Cal. 3-sepalus, sepalis ovatis; *Pet.* o. *Stamina* ovariaque plurima. *Cariopsides* baccatæ, plurimæ in capitulum, stylo terminatæ, 1-loculares, 1—2-spermæ; *Semina* obovoidea lævigata. *D C.*

Specific Name and Synonyms.

HYDRASTIS* *canadensis.*

HYDRASTIS canadensis. *Linn. Sp. Pl. p.* 784. *Mich. Bor. Am. v.* 1. *p.* 317. *Willd. Sp. Pl. v.* 2. *p.* 1340. *Pursh, Fl. Am. v.* 2. *p.* 389. *De Cand. Syst. Veget. v.* 1. *p.* 218. *De Cand. Prodr. v.* 1. *p.* 23. *Spreng. Syst. Veget. Cura post. p.* 220. *(not of Poiret Encycl. et Lam. Ill. t.* 500.*)*

WARNERIA canadensis. *Mill. Ic. t.* 285.

DESCR. The *root,* which I have not seen, is perennial, and described by authors as composed of fleshy tubercles, of an intensely yellow colour, affording a dye of the same tint, bitter, somewhat pungent and tonic, according to Dr. BARTON. *Stem* erect, herbaceous, rounded, about a foot high, simple, hairy upwards, bearing two *leaves* of a rather large size, the lower one petioled, the other sessile, palmate, with three or five deep inciso-serrated segments, hairy,

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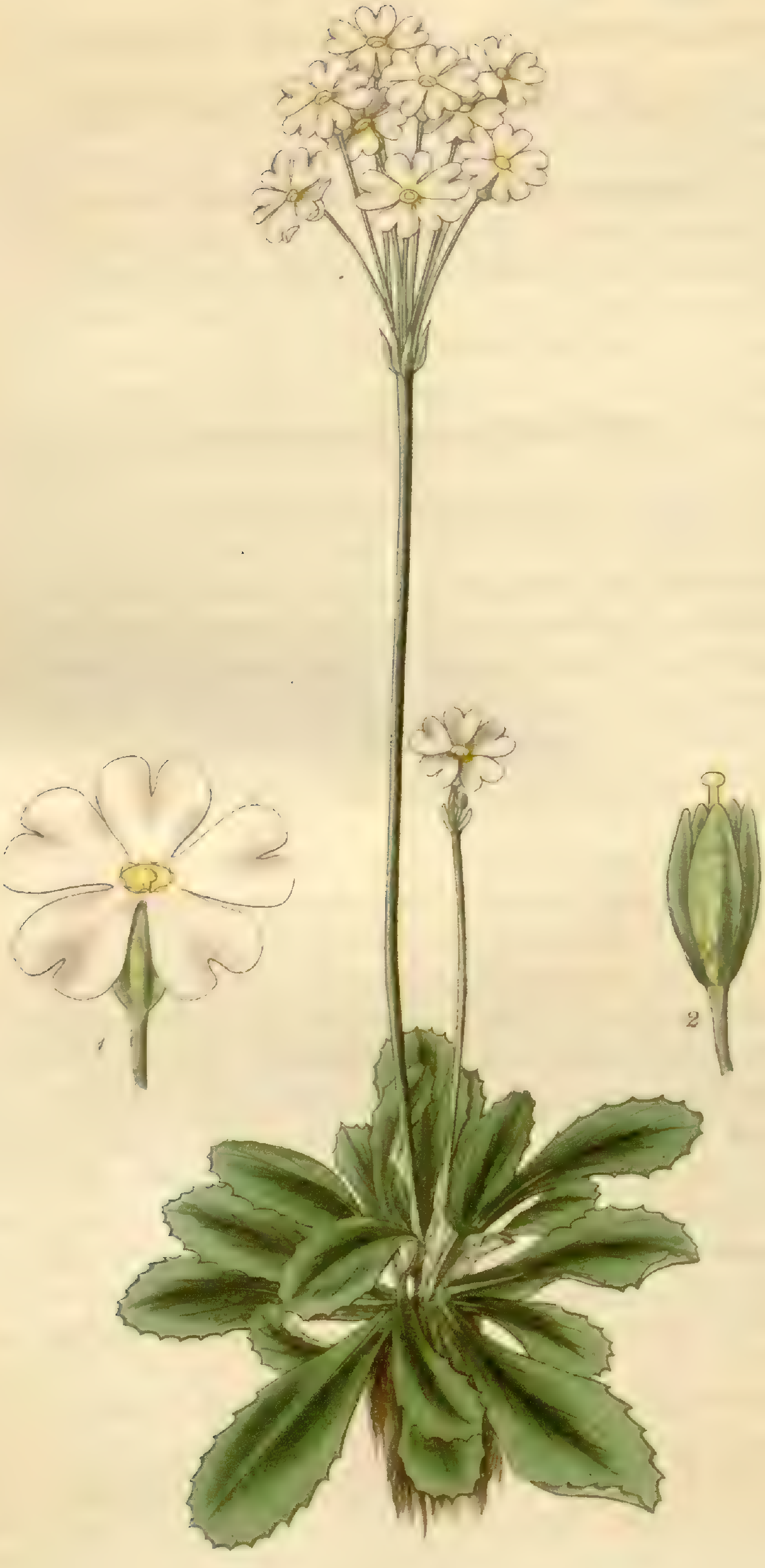
* From ὑδωρ, *water*: this plant growing in moist places.

veiny, dark green. *Flower-stalk* solitary, terminal, about two inches long, single-flowered. *Flowers* small. *Calyx* of three deciduous, broadly-ovate, pale greenish-white, concave, slightly-downy segments. *Stamens* many, longer than the pistils. *Filaments* flat, dilated upwards, contracted again below the anther, whose two cells are separated from each other and lateral. *Pistils* several. *Germens* oval, glabrous, attenuated upwards into a short *style*. *Stigma* obtuse, scarcely lobed. The *fruit*, which I have not seen, resembles a raspberry, is red, and consists "of many little two-seeded *berries* collected into a globose head, and each crowned with the persistent style, one-celled, two-, or by abortion, one-seeded, one *seed* placed above the other. MICH.

I had the satisfaction of receiving a flowering specimen of this rare and little-known plant, in May, 1830, from the garden of Mr. JAMES SMITH of Monkwood Nursery, Ayr. It was introduced into England, according to Mr. P. MILLER, in 1759, and was figured by that author in his Icones, above quoted. It was probably then soon lost to our gardens, and has now been again imported by Mr. SMITH, whose collection is so rich in the rarer American plants. It is stated by MICHAUX to be an inhabitant of the tract of the Alleghany Mountains, from Canada to Carolina, yet I have never received specimens of it from any of my American correspondents, though I have particularly requested it. The plant so called by POIRET, and figured in the Illustrationes of LAMARCK, (t. 500,) though quoted as such, by Sir JAMES E. SMITH, is rightly referred by DE CANDOLLE to his ACTÆA *palmata*. On that account, and because a representation does not exist in any generally accessible work, with which I am acquainted, I have been glad of this opportunity of giving it a place in the Botanical Magazine, although the fruit is still a desideratum; and although it is not a plant that recommends itself as eminently deserving a place in our flower-gardens, save in those of the curious.

Fig. 1. Flower, after the Calyx has fallen away. 2, 3. Leaves of the Calyx. 4. Stamen. 5. Pistil.—*Magnified.*



W J H del.

Pub. by S. Curtis, Walworth, Oct.r 1 1830.

Swan.

PRIMULA PUSILLA. PALE-FLOWERED AMERICAN BIRD'S-EYE PRIMROSE.

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Class and Order.

PENTANDRIA MONOGYNIA.

(Nat. Ord.—PRIMULACEÆ.)

Generic Character.

Flores subumbellati, involucrati. *Cal.* tubulosus, 5-fidus, s. 5-dentatus, persistens. *Cor.* tubulosa, fauce vel nuda vel glandulosa, *limbo* 5-lobo. *Caps.* apice 10-dentata, polysperma. *Spr.*

Specific Character and Synonyms.

PRIMULA* *pusilla;* foliis obovatis basi attenuatis acute dentatis subtus calycibusque farinosis, involucri foliolis basi vix gibbosis, corollæ laciniis obcordatis bifidis (pallidis) tubo subæque longis.

PRIMULA pusilla. *Goldie in Edin. Phil. Journ. v. 6. p. 322. t. 11. f. 22. Hook. Exot. Fl. v. 1. t. 68. Richardson in Frankl. 1st Journ. ed. 2. App. p. 21. Spreng. Syst. Veget. v. 2. p. 575. Sweet, Brit. Fl. Gard. 2d Ser. t. 5.*

DESCR. *Root* small, fibrous, perennial. *Leaves* many, from the crown of the root, spreading, about two inches long, obovate, attenuated at the base, but not stalked, distinctly and sharply toothed at the margin from the base to below the middle, pale green above, mealy below. *Scape* from three or four to six and seven inches high, scarcely

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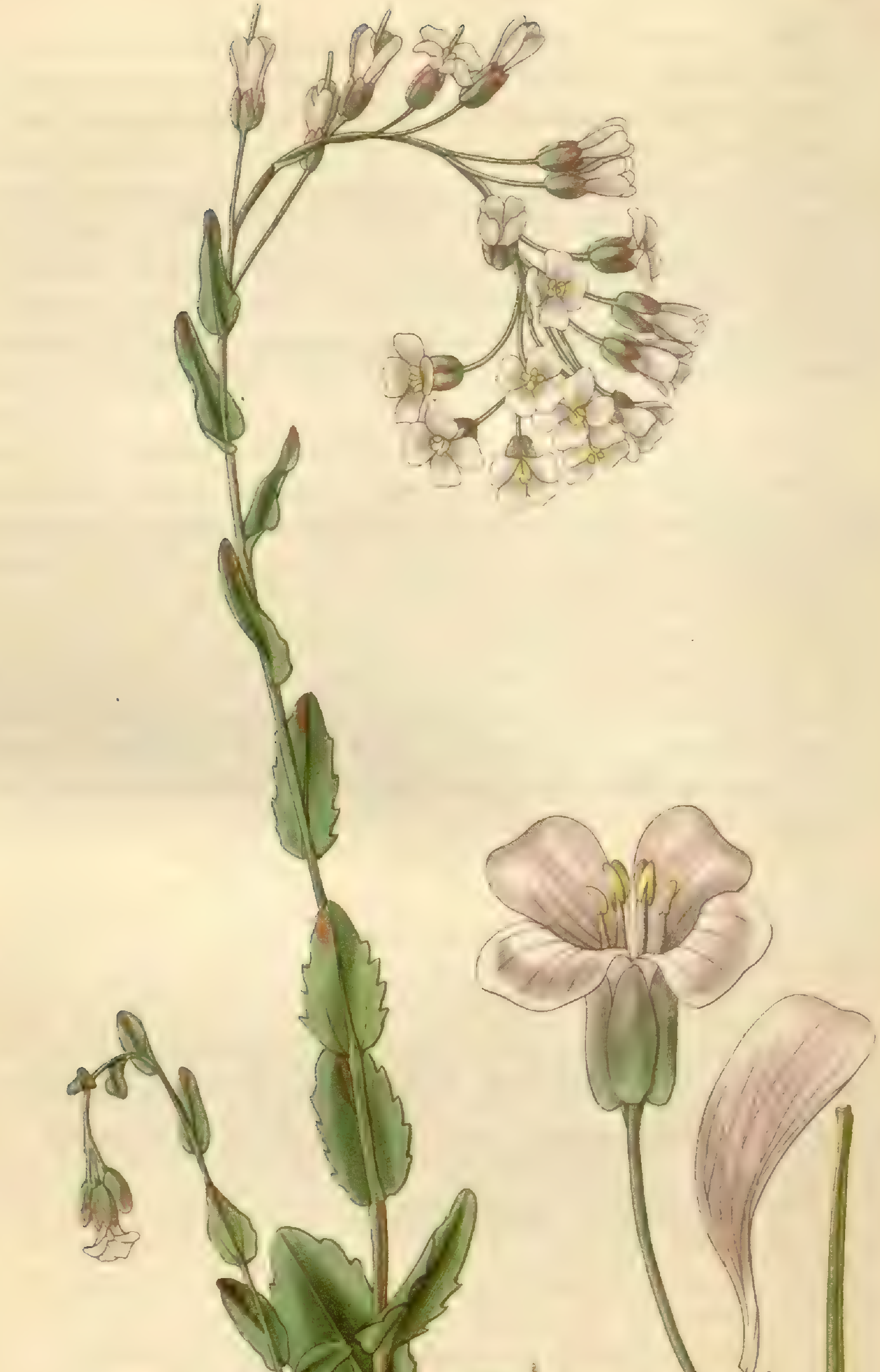
* See derivation at t. 2973.

mealy, naked, bearing an *umbel* of several flowers. *Involucre* of several lanceolate, subulate leaves, slightly concave, but scarcely gibbous at the base, a little mealy. *Peduncles* slender. *Calyx* oblongo-oval, cut about half way down into five lanceolato-ovate, erect segments. *Corolla: tube* cylindrical, yellow; *limb* of five, horizontally patent, obcordato-cuneate, bifid, very pale, whitish, flesh-coloured segments, the *mouth* yellow, with five obsolete, yellow glands, and a bright yellow ring round it. *Germen* globose: *Style* nearly as long as the tube: *Stigma* capitate.

Great difficulty unquestionably attends the determining those species of the Genus PRIMULA that are allied to the P. *farinosa,* among which the present may certainly be reckoned. I had been lately disposed to unite it with what I take to be the true P. *mistassinica,* figured at t. 2073 of our Magazine, but on seeing that figure, Mr. GOLDIE, the original authority for P. *pusilla,* pronounced the two to be decidedly distinct. At his suggestion, therefore, I have again examined the P. *pusilla* as it flowered in a cold frame in our Glasgow Botanic Garden, in April, 1830, and all the differences that I can discover are detailed in the figure and in the description. If these should prove constant, therefore, I have no hesitation in pronouncing the two plants distinct. The present has always pale flowers (whence I have been led to doubt the correctness of SWEET's figure), and they are delightfully fragrant. The species inhabits many parts of Canada, where it is not unfrequently mistaken for the real P. *farinosa.*

Fig. 1. Flower. 2. Calyx and Pistil.—*Magnified.*

3021



W.J.H.del.

Pub. by S. Curtis, Walworth, Oct.r 1.1830

ARABIS COLLINA. HILL ROCK-CRESS.

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Class and Order.

TETRADYNAMIA SILIQUOSA.

(Nat. Ord.—CRUCIFERÆ.)

Generic Character.

Siliqua linearis, valvis planis medio uninerviis. *Semina* in quoque loculo 1-serialia, ovalia aut orbicularia, compressa. *Cotyledones* planæ, accumbentes. *Flores* albi, *aut rarius-rosei.* D C.

Specific Character and Synonyms.

ARABIS* *collina;* foliis oblongo-ovatis sinuato-dentatis pubescentibus pube stellata, radicalibus petiolatis caulinis sessilibus, siliquis pedicello octies longioribus erectis.

ARABIS collina. *" Tenore Prodr. Fl. Neap. xxxix." De Cand. Syst. v. 2. p. 241. Prodr. v. 1. p. 148. Spreng. Syst. Veget. v. 2. p. 893.*

DESCR. *Root* " perennial," small, fibrous, throwing up two or more stems. *Stems* six to eight inches high, erect, leafy. *Leaves* pubescent with minute, downy, stellated hairs, those of the root spreading, numerous, spathulate and petiolate, large, those of the stem ovate, or ovato-oblong, sessile, smaller upwards, and semiamplexicaul, all of them coarsely and even sinuato-dentate at the margin. *Raceme* terminal, leafless and destitute of bracteæ, always drooping when in flower. *Pedicels* long, slender, quite glabrous. *Calyx* glabrous, erect, of four oblong leaflets, tinged with purple, two opposite ones saccate at the base. *Petals* obovato-cuneate, retuse, clawed at the base, of a delicate, purplish, rose-colour, twice as long as the calyx. *Stamens* shorter than the petals. *Anthers* oblong, yellow. *Pistil,* linear, filiform, erect. *Stigma* scarcely dilated, notched.

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* This word signifies *native of Arabia,* a territory, of which the dry nature of this plant and a general preference of arid spots, caused it to be presumed indigenous.

This very pretty species of Rock-Cress will in all probability prove hardy, and amply deserving of cultivation on account of its graceful and drooping raceme of pale purple flowers. Seeds of it were sent to our Botanic Garden, by Dr. FISCHER of St. Petersburgh, and the plant has been hitherto with us confined to the frame. It is a native of hills in the environs of Naples ; but I am not aware that it has any where been figured.

Fig. 1. Flower. 2. Petal. 3. Pistil.—*Magnified.*

3022

W.J.H. del.

Pub by S. Curtis Walworth. Oct 1 1830

RANUNCULUS MONTANUS. YELLOW MOUNTAIN RANUNCULUS.

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Class and Order.

POLYANDRIA POLYGYNIA.

(Nat. Ord.—RANUNCULACEÆ.)

Generic Character.

Cal. 5-sepalus, sepalis basi non solutis, deciduis. *Pet.* 5, rarius 10, intus basi squamula foveolari nectarifera instructa. *Stam.* ovariaque plurima; *cariopsides* ovatæ, subcompressæ, in mucronem aut cornu semine vix longius desinentes, læves, striatæ aut tuberculatæ, in capitulum globosum cylindraceumve dispositæ. *D C.*

Specific Character and Synonyms.

RANUNCULUS* *montanus;* caule 1-floro, foliis (paucis) glabris tripartitis laciniis bi- trifidis laciniis oblongo-cuneatis, apice obtusis inciso-serratis supremis sessilibus, ultimi laciniis linearibus integerrimis, pedunculo appresso-piloso, sepalis patentibus subpilosis, germinibus in capitulo subrotundo-aggregatis, stylo subæque longo uncinato, radice tuberoso.

RANUNCULUS montanus. *Willd. Sp. Pl. p.* 1321. *De Cand. Syst. Veget. v.* 1. *t.* 276. *Prodr. v.* 1. *p.* 36. *Spreng. Syst. Veget. v.* 2. *p.* 651. *Schlecht. Anim. II. p.* 19.

RANUNCULUS nivalis. *" Scop. Carn. ed.* 2. *n.* 686 *?" Jacq. Austr. t.* 325, 326. *(non Linn.)*

DESCR. *Root* an oblong, horizontal, truncated, and knobbed *tuber,* throwing down from its under side very many exceedingly long and stout fibres, scarcely divided but at or near the extremity, with small, hair-like radicles, and bearing, above, one or two short *stems*, scarcely a finger's length in height, erect, terete, rather stout, glabrous. *Leaves* few; one or two lower ones petioled, the rest (generally two) sessile, orbiculari-cordate in their circumscription, glabrous, deeply divided into three oblongo-cuneate, obtuse lobes, often again bifid, and at the extremity, inciso-serrate, nerved, dark green, paler beneath: *petiole* flat above, sheathing, and purplish at the base. The uppermost *leaf* (or bractea) besides being sessile, has about five linear, entire, acute lobes. *Peduncle* terminal, solitary, single-flowered, terete, clothed with appressed hairs. *Calyx* of five, patent, concave, ovato-lanceolate, acute, yellow-green leaves, slightly hairy with spreading hairs. *Corolla* large, of five broadly-obcordate, very bright yellow *petals*, glossy above, paler beneath, and opaque. *Scale* small, with a pore above. *Germens* numerous, collected into a rounded head; *style* nearly of the same length, recurved, yellow.

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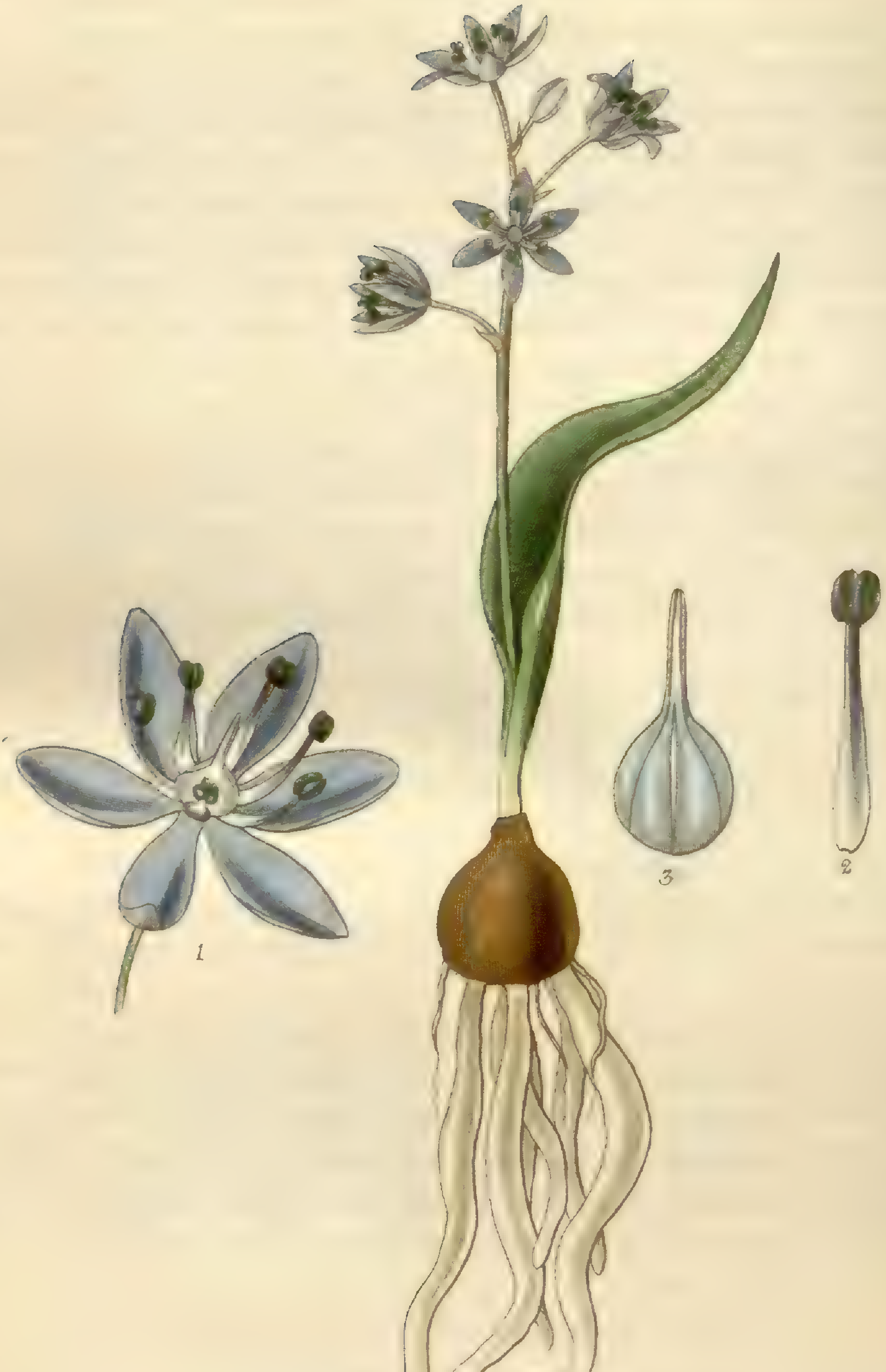
* From *Rana,* a frog; many of the species inhabiting the places where those animals abound.

RANUNCULUS *montanus* is a native of Alpine pastures in various parts of the South of Europe, from those of Carpathia to the Italian and Pyrenæan chains. But it is liable to considerable variation in size and hairiness, and JACQUIN has devoted two plates to its different appearances. SCHLECHTENDAL unites with it the R. *Villarsii* of DE CANDOLLE, and observes how closely allied to it is R. *Gouani* of WILLDENOW.

It is a very handsome species, and well worthy of cultivation in every collection of hardy, and especially Alpine plants, flowering in April and May if slightly protected from the severity of the winter frosts, and increasing rapidly by its curious roots. The colour of the flower is a particularly bright yellow, and the upper side is quite glossy.

Fig. 1. Petal. 2. Calyx and Stamens. 3. One of the Pistils.—*Magnified.*

3023.



W.J.H. del.

Pub. by S. Curtis. Walworth. Octr. 1. 1830

(3023)

SCILLA PUMILA. DWARF SQUILL.

Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—ASPHODELEÆ.)

Generic Character.

Cor. subrotata. *Stamina* æqualia, basi petalis adnata. *Semina* globosa. *Spr.*

Specific Character and Synonyms.

SCILLA * *pumila;* corolla patente, folio solitario vaginante apice calloso, racemo erecto, bracteis pedicello multo brevioribus.

SCILLA pumila. *Broteir. Fl. Lusitan. v.* 1. *p.* 527. *Spreng. Syst. Veget. v.* 2. *p.* 67. *Graham in Edin. Phil. Journ.*

DESCR. *Leaf* (two inches long, half an inch broad) generally, or always as in the specimen described, solitary, involute, ovato-acuminate, with a callous, subcylindrical apex, somewhat carinate, waved, glabrous. *Scape* about the same length as the leaves, erect, filiform, glabrous, green, racemose (five-flowered in the present specimen,) pedicels purplish, gradually to about half an inch, springing from the axil of a small, sheathing bractea, which is occasionally drawn out into a point, projecting from some part of a truncated, ragged extremity. *Corolla* of a bright lilac colour, half an inch across, its segments spreading, subunguiculate, ovate, slightly undulate, having a blue, thickened middle rib, and an inflected mucro. *Stamens*

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* (σκυλλω, *I injure*, according to MILLER). The root of SCILLA is a violent poison, as food, but often employed to great advantage in medicine. It is remarkable that the Arabic name for this plant is identical: *asgyl.*

inserted into the base of the corolla, and rather more than half the length of its segments; *filaments* light lilac, dilated towards their base, but contracted immediately above their insertion; *anthers* erect, blue; *pollen* greenish. *Germen* blue, ovate, three-lobed, with a distinct lighter-coloured suture along the front of each lobe. *Style* furrowed.

This pretty little species of Scilla flowered in the garden of David Falconar, Esq. of Carlowrie, near Edinburgh, in May, 1830. It is a native of Portugal, and is said to vary rarely with white flowers.

Fig. 1. Flower. 2. Stamen. 3. Pistil.—*Magnified.*

3024

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A.
C. pubescens.

Pub. by S. Curtis. Walworth, Oct^r 1. 1830.

W. J. H. del^t

CYPRIPEDIUM PARVIFLORUM. LESSER-FLOWERED LADY'S SLIPPER.

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Class and Order.

GYNANDRIA DIANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Labellum ventricosum, inflatum, (nunc saccatum.) *Columna* postice terminata lobo petaloideo (stamine sterili,) antheras distinguente. *Petala* 2 antica sæpius connata. *Br.*

Specific Character and Synonyms.

CYPRIPEDIUM* *parviflorum ;* caule folioso, lobo columnæ triangulari acuto, labello petalis breviore subtus superneque depresso.

CYPRIPEDIUM parviflorum. *Salisb. in Linn. Trans. v.* 1. *p.* 77. *t.* 2. *f.* 2. *Pursh, Fl. Am. v.* 2. *p.* 594. *Ait. Hort. Kew. ed.* 2. *v.* 5. *p.* 221. *Willd. Sp. Pl. v.* 4. *p.* 143. *Sweet, Brit. Fl. Gard. t.* 80. *Spreng. Syst. Veget. v.* 3. *p.* 745. *(not Bot. Mag. t.* 911.*)*

DESCR. *Stem* solitary, erect, downy, about a foot high, rounded, leafy. *Leaves* slightly downy, especially the uppermost ones, few, remote, ovato-lanceolate, acute, waved, striated, four to five inches long. *Flowers* very handsome, delightfully fragrant, especially at night, solitary, or two at the extremity of the stem, each placed on a bracteated *peduncle ; bractea* large, leaf-like. *Corolla* greenish at the base, the rest either a rich chocolate-brown, or a greenish ground spotted and striated with brown : upper *petal* broadly ovate, acuminated, waved, the two lower ones combined into one, pointing downwards, of the same shape as the upper one, the latter considerably longer than the *lip,* the lower (double one) scarcely so long : two lateral petals considerably longer than the rest, linear-lanceolate, spirally twisted, all of them downy at the base within. *Labellum* standing forward horizontally, bright yellow, veined, and furrowed at the veins, oval, convex below, yet somewhat flattened, above decidedly depressed, the *mouth* somewhat elliptical, blotched with red at the margin as is the inside. *Column* short, cylindrical; its petaloid lobe cordato-triangular, fleshy, keeled below, grooved above, bright yellow, greenish in the centre, and spotted with red. *Stigma* stalked, greenish, on each side of which is a horn-like process, bearing each a sessile *anther,* with two cells, and a waxy, or horny-like *pollen.* *Germen* curved, not twisted, downy, cylindrical, sulcate, tapering into the stalk.

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* For derivation, see t. 2938 (CYPRIPED. *macranthon.*)

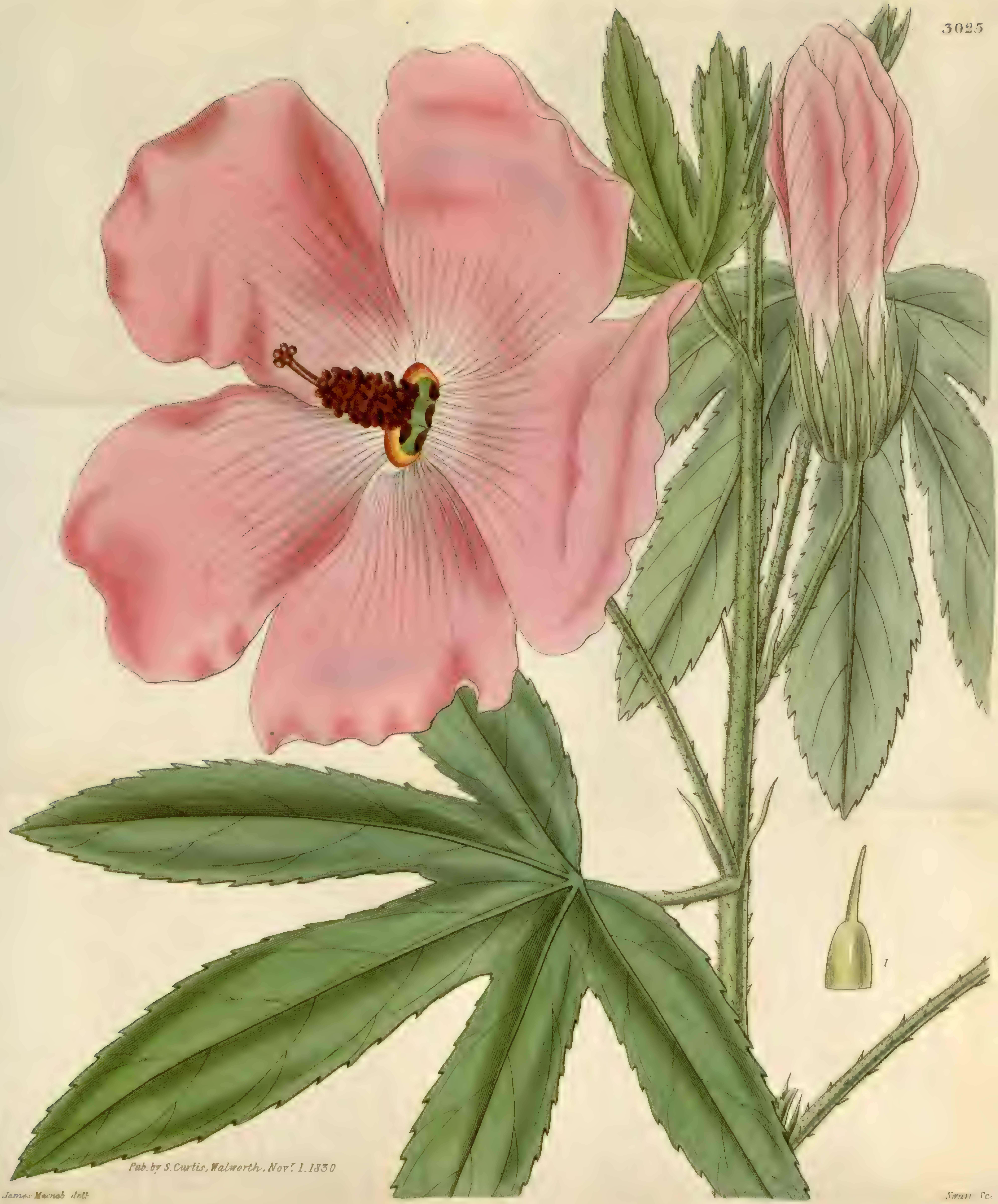
I have been much gratified in the early part of the present month (May, 1830,) with the beauty and variety of CYPRIPEDIA, and the numerous specimens of each kind, flowering under a common frame in the Glasgow Botanic Garden, at one and the same time. C. *macranthon*, *humile*, *spectabile*, *arietinum*, *pubescens*, and *parviflorum*, seemed to vie with each other in the rich colours, or curious structure of their blossoms. The two latter I had now the opportunity of comparing in a living state, and of ascertaining that, however difficult it may be to discriminate between them in the dried specimens, they were now at once to be recognized by the form of the labellum and the upper petal of the corolla. WILLDENOW makes the only distinction to exist in the lobe of the column, which I find to be the same in both, or to possess only occasionally trifling differences. The lip in both is said to be compressed; but they are so in a very different manner. That of C. *pubescens* (whose whole flower is considerably larger and paler coloured) is remarkably convex, as gibbous above as below, (see fig. A.), and only *laterally* compressed, whereas the same part is in our plant somewhat flattened below, remarkably so above, and consequently broader from side to side, than it is from top to bottom. In C. *pubescens,* the upper petal is longer, lanceolate, and much attenuated, and its blossoms are scentless; in the present individual, the upper petal is broadly ovate, acuminated, the bases of all the petals are less hairy, and the flowers yield a powerful and delicious fragrance. Our roots were sent from Canada.

C. *parviflorum* of Old Series of Bot. Mag. t. 911, should assuredly be referred to C. *pubescens*, and should be thus characterized:

C. *pubescens;* WILLD. caule folioso, lobo columnæ triangulari acuto, labello petalis breviore subtus superneque convexo-gibboso lateraliter compresso.

C. parviflorum. *Curt. Bot. Mag. t.* 911.

NOTE. It ought to have been stated when describing TRILLIUM *erythrocarpum* in a late number (vid. t. 3002) that the plant erroneously figured under that name by Mr. CURTIS, t. 855, is TRILLIUM *grandiflorum,* as noticed in the Index.



Pub. by S. Curtis, Walworth, Nov^{r}. 1. 1830

James Macnab del^{t}

Swan Sc.

HIBISCUS SPLENDENS. SPLENDID HIBISCUS.

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Class and Order.

MONADELPHIA POLYANDRIA.

(Nat. Ord.—MALVACEÆ.)

Generic Character.

Cal. cinctus involucello sæpius polyphyllo, rarius foliolis paucis aut inter se coalitis. *Petala* hinc non auriculata. *Stigmata* 5. *Carpella* in capsulam 5-locularem coalita, valvis intus medio septiferis, loculis polyspermis aut rarius monospermis. *D C.*

Specific Character and Synonyms.

HIBISCUS * *splendens;* " frutex, aculeis rectis basi tuberculatis, corolla expansa extrorsum costis pluribus flexuosis tomentosis, calyce 5-fido laciniis acutis 3-nervibus carinatis, involucro multipartito laciniis lineari-subulatis interdum ramosis calyce paulo brevioribus, pedunculo supra medio oblique articulato, foliis palmatis 3—5-lobatis lobis lanceolatis." *Graham.*

HIBISCUS splendens. *Frazer MSS. Graham in Edin. Phil. Journ. p.* 175.

DESCR. *Stem* woody, in our specimen ten feet high, erect, round. *Bark* every where green, covered with short, stellated pubescence, interspersed with short, spreading, nearly straight, tubular *aculei*, arising from large, callous, glandular bases, which are red on the young parts of the plant. *Branches* axillary, woody, scattered, ascending, round. *Leaves* six or seven inches long, six inches broad, spreading, palmated, three to five-lobed, light green, reticulated, thickly covered with rather harsh, stellated, unbranched pubescence on both sides; lobes lanceolate, unequally serrated, ribs and veins prominent and aculeate below. *Petioles* three to five inches long, nearly as long as the leaves, slightly flattened above, filled with pith, which

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* For derivation, see t. 2891. (H. *liliiflorus.*)

is continued into the ribs of the leaves. *Stipules* an inch long, green, subulate, linear, unconnected with the petioles, pubescent on the outside. *Peduncle* solitary, single-flowered, longer than the petiole, from the axil of which it springs, and resembling it, filled with pith, obliquely reticulated, and bent about three-fourths of an inch from the calyx. *Involucre* about an inch long, green, divided to its base into many linear-subulate segments, which are occasionally branched, smooth on the inside, covered on the outside with long, harsh, simple, spreading hairs, arising from glandular bases. *Calyx* yellow, deeply five-cleft, rather longer than the involucre, densely covered with softer, shorter hairs on the outside, smooth within; segments tapering, three-nerved, two of the nerves lateral, the other forming a strong keel. *Corolla* (in our plant, three inches and a half long by six inches across when expanded,) rose-coloured; *petals* with many colourless, flexuose nerves, prominent on the outside, and there, especially, pubescent, connected to each other and to the lower part of the united filaments near their base, while towards their lower part, each having two dense tufts of dark-red wool on the inside of its callous base, within a large, obcordate, slightly orange-coloured spot, having a dark rose-coloured margin. In the entire flower this margin forms a continuous line around the centre, inclosing a space about half an inch in diameter, and five tufts of red wool, produced by the confluence in pairs of the tufts on the petals. *Stamens* numerous, united; *filaments* at the lower part pale, above rose-coloured; *Anthers* dark crimson, arranged in a pyramidal form; *Pollen-granules* very large and sphærical: *Style* projecting beyond the stamens, as is usual in the Genus, but much shorter than the petals, supporting five deep red, hairy, round *stigmas*. *Germen* covered with erect, silky hairs, quinquelocular; *Ovules* numerous, attached to the central receptacle, and arranged in two rows in each loculament. *Seeds* ash-coloured, wrinkled, warted, angular.

This noble plant was raised in various collections from New Holland seeds, sent by Mr. Fraser, in 1828, but I am not aware that it flowered any where prior to the present time, (May, 1830,) when it produced its superb blossoms in the stove of the Royal Botanic Garden, Edinburgh. Its only fault as an object of cultivation is its great size, but in its native situation it must present a most brilliant appearance. Mr. Frazer writes of it: "this I consider the king of all the known Australian plants, I have seen it twenty-two feet and a half high. The flowers, this season, measured nine inches across, they were of the most delicate pink and crimson colour, and literally covered the entire plant." Graham.

Fig. 1. Piliferous Gland from the Stem.—*Magnified.*

3026

Pub. by S. Curtis, Walworth. Novr 1 1830.

W. J. H. delt

Saxifraga petræa. Stone Saxifrage.

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Class and Order.

Decandria Monogynia.

(Nat. Ord.—Saxifrageæ.)

Generic Character.

Cal. 5-fidus, inferus vel superus vel semisuperus, persistens. *Pet.* 5. *Capsula* birostris, intra rostra dehiscens, polysperma, dissepimento placentifero, seminifero. *Spr.*

Specific Character and Synonyms.

Saxifraga * *petræa ;* annua, glanduloso-pilosa, foliis carnosis trilobis, radicalibus cordatis lobis incisis sublonge petiolatis, caulinis subcuneatis supremis indivisis, pedunculis germinibusque inferis glanduloso-hispidis, laciniis calycinis oblongis erectis, petalis obovatis retusis.

Saxifraga petræa. *Linn. Sp. Pl. p.* 578. *Jacq. Ic. Rar. v.* 1. *t.* 81. *Don, Saxifr. in Linn. Tr. v.* 13. *p.* 443. *Spreng. Syst. Veget. v.* 2. *p.* 369.

Saxifraga rupestris. *Willd. Sp. Pl. v.* 2. *p.* 653.

Saxifraga Ponæ. *Sternb. Saxifr. p.* 47. *t.* 18, *et t.* 11. *f.* 6.

Descr. *Root* annual. *Stem* erect, and, as well as the branches and leaves, glanduloso-pubescent, reddish, terete, much branched, the branches often divaricating. *Leaves* mostly trifid, fleshy, those of the root on long, slender stalks, cordate, the three lobes bi- or trifid, the segments short, ovate, rather acute, those of the stem generally inclined to be cuneate, the segments simple, linear, the late-

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* For derivation, see t. 2959 (S. *leucanthemifolia*).

ral ones often bifid, the uppermost ones resembling bracteas, small, entire. *Flowers* moderately large, on terminal and lateral, simple, or mostly branched *peduncles,* which latter, as well as the inferior germen, are hispid with glandular hairs. *Calyx* superior, glabrous, of five erect, oblong, obtuse, erect segments. *Petals* obovato-cuneate, pure white, retuse, three-nerved below. *Stamens* alternately shorter. *Styles* two, small, abortive ? (in the present individual).

The present very pretty species of SAXIFRAGE was sent by JOHN HUNNEMAN, Esq. of London, from the continent, to the Glasgow Botanic Garden, under the name of SAXIFR. *Ponæ.* Authors seem now to be generally agreed, in considering this as identical with S. *petræa :* and, indeed, the specimens quite accord with the true S. *petræa,* which I have gathered abundantly in Savoy, upon the " Petit Mont Cenis." It is a native also of the Monte Baldo in the north of Italy, and of the Carinthian Alps, while the same plant has been introduced to our collections by Mr. DRUMMOND, from the Rocky Mountains of North America.

It is quite a hardy plant, and flowers in May.

Fig. 1. Flower. 2. The same, from which the Petals have been removed. 3. Pistil. 4. Segment of the Calyx and two Stamens. 5. Styles and Top or Disk of the Germen.—*Magnified.*

W.J.H. del.

Pub by S. Curtis Walworth Nov^r 1.1830.

Swan sc.

SCORZONERA MOLLIS. SOFT VIPER'S-GRASS.

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Class and Order.

SYNGENESIA ÆQUALIS.

(Nat. Ord.—COMPOSITÆ. DIV. CICHORACEÆ.)

Generic Character.

Involucrum imbricatum squamis latiusculis. *Receptaculum* nudiusculum. *Pappus* plumosus, sessilis v. stipitatus.

Specific Character and Synonym.

SCORZONERA * *mollis;* caule uni- trifloro foliisque lineari-subulatis canaliculatis involucroque pubescenti-tomentosis, radice tuberosa.
SCORZONERA mollis. *M. Bieb.*

DESCR. *Root* a large, and almost woody *tuber,* more or less lobed. *Stem* woody below, in the wild specimens very short and single-flowered, in the cultivated ones elongated, (a span high) branched, three to four-flowered, woolly, glaucous. *Leaves* crowded at the base, remote upwards, linear-subulate, often recurved, deeply canaliculate, downy, especially beneath, almost cobwebby, glaucous-green, externally striated, the margin of the lower leaves brown. *Peduncles* lateral and terminal, slightly thickened upwards, cobwebby. *Involucre* cylindrical, of few large, closely imbricated scales, the lower ones the most downy. *Corollas* linear obtuse, five-toothed, not numerous, the tube long, hairy above. *Anthers* large, conspicuous, dark brown. *Style,* in our specimens, often geniculated, and drawn out as it were, below the anthers. *Stigmas* long, linear, revolute, bright yellow. *Germen* oblong. *Pappus* of several unequal, scabrous, and plumose hairs.

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* The word *Scorzonera* owes its origin to *scurzon,* (the Catalonian name for a viper,) this plant passing in Spain for an assured remedy against the bite of that reptile. There is reason to fear, however, that the form of the root, often resembling a serpent, has had some share in causing this belief.

The Genus SCORZONERA is one, the determination of whose species is attended with considerable difficulty, and, probably, many varieties have been raised to the rank of species. Such I have no reason to believe is the case with the present individual, which appears to have been discovered in Tauria, by MARSCHALL BIEBERSTEIN, and described by him, probably in the Supplement to the Flora Taurico-Caucasica, a work which I have not the good fortune to possess. Dr. FISCHER sent the plants to the Glasgow Botanic Garden, which, sheltered by a cool frame, blossomed in April, 1830. I am indebted also to Baron STEVEN, for native Taurian specimens: and from those individuals, I have drawn the singular tuberous root.

Fig. 1. Root (from a wild specimen) *nat. size.* 2. Floret. 3. Hair of the Pappus. 4. Portion of the Hair itself.—*Magnified.*

Pub. by S. Curtis, Walworth, Nov^r 1.1830

J. H. del^t

Swan Sc.

(3028)

Selago Gillii. Dr. Gill's Selago.

Class and Order.

Didynamia Angiospermia.

(Nat. Ord.—Selagineæ.)

Generic Character.

Cal. monosepalus, ovatus aut campanulatus, 3—5-fidus aut 3—5-dentatus. *Cor.* tubulosa, 4—5-loba. *Stam.* 4. *Capsula* 2-locularis, loculis sporite separabilibus monospermis. *Choisy.*

Specific Character.

Selago[*] *Gillii;* caule terete subsimplici pubescente, foliis sparsis lineari-oblongis glabris, floribus umbellato-capitatis, calyce tripartito pubescente.

Descr. *Stem* hardly a foot high, rounded, slender, terete, shrubby and downy, scarcely branched. *Leaves* scattered, erecto-patent, linear-oblong, rather obtuse, glabrous, entire, slightly convex above, about three-fourths of an inch long. *Flowers* collected into a somewhat umbellate head. *Bracteas* lanceolate and downy. *Calyx* downy, oblongo-ovate, deeply cut into three lanceolate teeth, of which one is smaller than the other two. *Corolla* of a delicate purplish rose-colour: *tube* long and slender, much ex-

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[*] Derived, according to Théis, from *sel,* sight, and *jach,* salutary, in the Celtic language: signifying beneficial to the sight. The same word *sel* is the root of *Selma,* as the palace of Fingal is called in Ossian, and equivalent to *Belle-vue.* There seems to be no analogy, except in name, between the Selago of the ancients and the present plant, and it is not easy to discover why Linnæus thus appropriated it. The Selago of the Celtic nations was held in high esteem, as a specific in diseases of the eyes, and many superstitious observances attended its preparation for that purpose by the Druids.

ceeding the calyx in length: the *limb* of five, spreading, linear-oblong segments, of which the outer one is the longest. *Stamens* four, inserted within the tube, of which two are protruded. *Filaments* glabrous, thickened upwards. *Anthers* transverse, one-celled, yellow. *Style* exserted: *Stigma* simple.

Of the twenty-one species of the Genus SELAGO, described by M. CHOISY in his Mémoire sur la Famille des Selaginées, one only is characterized by having a three-partite calyx, namely S. *ciliata*: but that is abundantly distinguished from our present plant by the different foliage, the long spikes of slender flowers, and the ciliated leaves, calyx and bracteas.

S. *Gillii* is an elegant little shrub, for the possession of which our Glasgow Botanic Garden is indebted to Mr. BECK of the Cape of Good Hope. The seeds were gathered in the interior of Southern Africa by Dr. GILL, to whom I have dedicated the species.

Fig. 1. Flower. 2. Bractea. 3. Calyx, 4. Stamens and Style.—*Magnified.*

3029

Pub. by S. Curtis, Walworth, Novr 1. 1830

W J H del

Swan Sc

RUSCUS ANDROGYNUS, α. CLIMBING BUTCHER'S BROOM.

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Class and Order.

DIŒCIA MONADELPHIA.

(Nat. Ord.—SMILACEÆ.)

Generic Character.

MASC. *Cal.* inferus, 6-partitus, laciniis internis corollinis. *Tubus* antherifer, cylindricus, truncatus.

FŒM. *Cal.* ut in masc. *Stylus* 1. *Stigma* simplex. *Bacca* globosa, 3-locularis, loculis 2-spermis.

Specific Character and Synonyms.

RUSCUS * *androgynus;* foliis margine floriferis. *Willd. Sp. Pl. v.* 4. *p.* 875. *Ait. Hort. Kew. ed.* 2. *p.* 421.

(α.) foliis subcordato-acuminatis, floribus subsessilibus in capitulum multiflorum congestis.—*Sims Tab. nostr.* 3029.

(γ). foliis ovato-oblongis acuminatis, floribus solitariis, pedicellis florem æquantibus. *Bot. Mag. t.* 1898.

RUSCUS *latifolius;* e foliorum sinu florifer et baccifer. *Dill. Hort. Elth. p.* 832. *t.* 250. *f.* 322.

The general aspect of this plant is very different from the figure which bears the same name, at t. 1898 of the present work: but having seen intermediate states, Dr. SIMS very judiciously has made it a variety. Our state of it is considered as the α, it being the same with the original authority for the species, figured and described in DILLENIUS's Hortus

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* This word was originally written Bruscus, being latinized from the Celtic *Beuskelen; beus,* signifying a bush, and *kelen* the holly. It is frequently called *Thorn-bush* or *Dwarf Holly.*

Elthamensis. Its leaves are short and broad, cordato-acuminate, the young ones delicate, and stipuled at the base. The flowers are collected into clusters, rarely solitary, almost sessile, and inserted in a sinus or notch at the margin of the leaves.

Our specimens had only male flowers, and were kindly sent from the rich collection of the Liverpool Garden, by the Messrs. Shepherds, who received them from the Canary isles. It is a native also of Madeira, and I have had fine dried specimens communicated to me from that island, by the Rev. Mr. Lowe.

It requires to be treated as a green-house plant.

Fig. 1. A young leaf. *Natural size.*—2. Flowers. 3. Abortive Pistil.—*Magnified.*

3030

J.H. delt.   Pub by S. Curtis Walworth Novr. 1.1830.   Swan Sc.

(3030)

PLEUROTHALLIS SAUROCEPHALUS. LIZARD-FLOWERED PLEUROTHALLIS.

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Class and Order.

GYNANDRIA MONANDRIA.

(Nat. Ord.—ORCHIDEÆ.)

Generic Character.

Sepala conniventia, subæqualia : lateralibus vel omnibus connatis. *Pet.* minora. *Labellum* liberum, cum columna subparallelum, integerrimum, petalis difforme. *Columna* elongata, aptera, libera, cum ovario continua. *Anthera* apice membranacea. *Pollinia* 2, nunc materia pulverea ad apicem cohærentia. *Lindl.*

Specific Character and Synonym.

PLEUROTHALLIS * *saurocephalus ;* caule compresso acute sulcato, folio elliptico carnoso plano spica subæquali, bracteis ovatis brevi-vaginatis, laciniis calycinis obtusis carnosis lateralibus semiconnatis, petalis labelloque bituberculato minutis.

PLEUROTHALLIS saurocephalus. *Lodd. Bot. Cab. t.* 1571.

DESCR. The *root* of this plant I have not seen. The *stem* is three or four inches long, about as thick as a swan's quill, compressed, but grooved on the upper side as if its edges were rolled in, and nearly of equal width throughout ; bearing at the extremity one rather large elliptical fleshy *leaf,* which is plane, or only with a depressed line in the centre, having a notch at the extremity. *Spikes* two, in the present instance,

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* From πλευρα, *a rib,* and θαλλω, *to flower,* probably in allusion to the distichous inflorescence of some species.

stance, from a groove in the base of the leaf, arising from one or more filamentous or fibrous bracteæ, scaly with bracteæ below, bearing flowers for the rest of their length, which are distichous, erect, each with a sheathing short *bractea* at its base. *Calyx* of three erect, nearly equal and connivent, thick and coriaceo-carnose, obtuse, pieces or leaves, quite surrounding and concealing the rest of the flower, downy and pale brownish-green externally, within minutely tubercled and richly spotted and lined with brown, of these the two lateral or lower ones are combined for half their length. *Petals* exceedingly minute, erect, pale-green, spathulate, acute, serrated at the point and crested. *Lip* scarcely larger than the petals, quite erect, ovato-oblong, greenish-purple, with two large tubercles near the middle. *Column* erect, smaller than the lip, semicylindrical, dilated, concave and serrated at the top and there somewhat winged, including the *stigma* and operculiform *anther*, which is yellow, and contains two hemispherical, yellow, waxy *pollen-masses*, united at their bases by a small gland. *Germen* clavate, furrowed, short, straight.

Brazil is still sending forth new contributions to our vegetable treasures; and among the Orchideous tribes her productions rank pre-eminent. Many of great interest are communicated to the rich collection of Mrs. ARNOLD HARRISON of Aigburgh, by her brother W. HARRISON, Esq. long a resident in that country; and among them is the present interesting species, which Mr. LODDIGES from specimens sent to him by Mr. F. WARRE from the same part of the world, has published in his Bot. Cabinet, under the appropriate name of PLEUROTHALLIS *saurocephalus*. It is unquestionably nearly allied to the P. *proliferus* of Mr. HERBERT in Bot. Register, t. 1298: but it differs in its stem, leaf, and in the shape and colour of the calyx.

P. *saurocephalus* flowered in Mrs. HARRISON's collection, in the stove, during the month of May, 1830.

Fig. 1. Flower. 2. Flower from which the upper Segment of the Calyx, 3, has been removed. 4. Petal. 5. Lip. 6. Column. 7. Inner view of the Anther. 8. Pollen-masses.—*Magnified.*

3031

Pub. by S. Curtis. Walworth. Nov.r 1. 1830.

W. J. H. del.t

Swan, Sc.

(3031)

DIELYTRA CANADENSIS. CANADIAN DIELYTRA.

Class and Order.

DIADELPHIA HEXANDRIA.

(Nat. Ord.—FUMARIACEÆ.)

Generic Character.

Pet. 4, 2 exteriora basi æqualiter calcarata, aut gibbosa. *Siliqua* bivalvis, polysperma. Herbæ *perennes.* Flores *racemosi, albi aut purpurascentes. D C.* (sub nom DICLYTRA.)

Specific Character and Synonyms.

DIELYTRA* *canadensis;* foliis decomposito-pinnatifidis laciniis anguste linearibus integris, scapo nudo, racemo simplici, calcaribus duobus rotundatis brevibus rectis, calycibus minutissimis, stigmate transverse sulcato.
CORYDALIS canadensis. *Goldie in Edin. Phil. Journ.* 1822. *p.* 330. *De Cand. Prodr. v.* 1. *p.* 126.
DIELYTRA eximia. (β.) *Hook. Fl. Bor. Am. v.* 1. *p.* 35.

DESCR. *Leaves* radical, glaucous-green, glabrous, three or four times pinnatifid, with the segments narrow-linear, acute: *Petiole* longer than the leaf, grooved on the upper side near the base. *Scape* radical, leafless, naked, terminated by a simple *raceme* of large and delicate, white *flowers.* Each *pedicel* has a recurved, rather small, lanceolate *bractea* at its base, and near its extremity, two smaller, more subulate, reddish ones, which spread over the gibbous bases of the outer petals. *Cal.* of two extremely minute, subulate, deciduous, opposite leaves. The *Corolla* is nearly heart-shaped in the greater part of its outline, from the base upwards: its *outer petals* being each very gibbous at the base, and presenting a rounded, straight, but short *spur*, the apex spreading; the two *inner* and lateral *petals* narrow, linear, keeled or winged at the back above, behind is a depression which receives the stigma and anthers. *Stamens* six, free to the base, three on each side of the pistil: *Filaments* long, white, the central one of the three on each side the broadest: *Anthers* small, yellow. *Pistil*: *Germen* green, subulate, tapering into a rather short *style* and crowned by the dilated, truncated, compressed and grooved *stigma*, which is generally loaded with the yellow *pollen* from the anthers.

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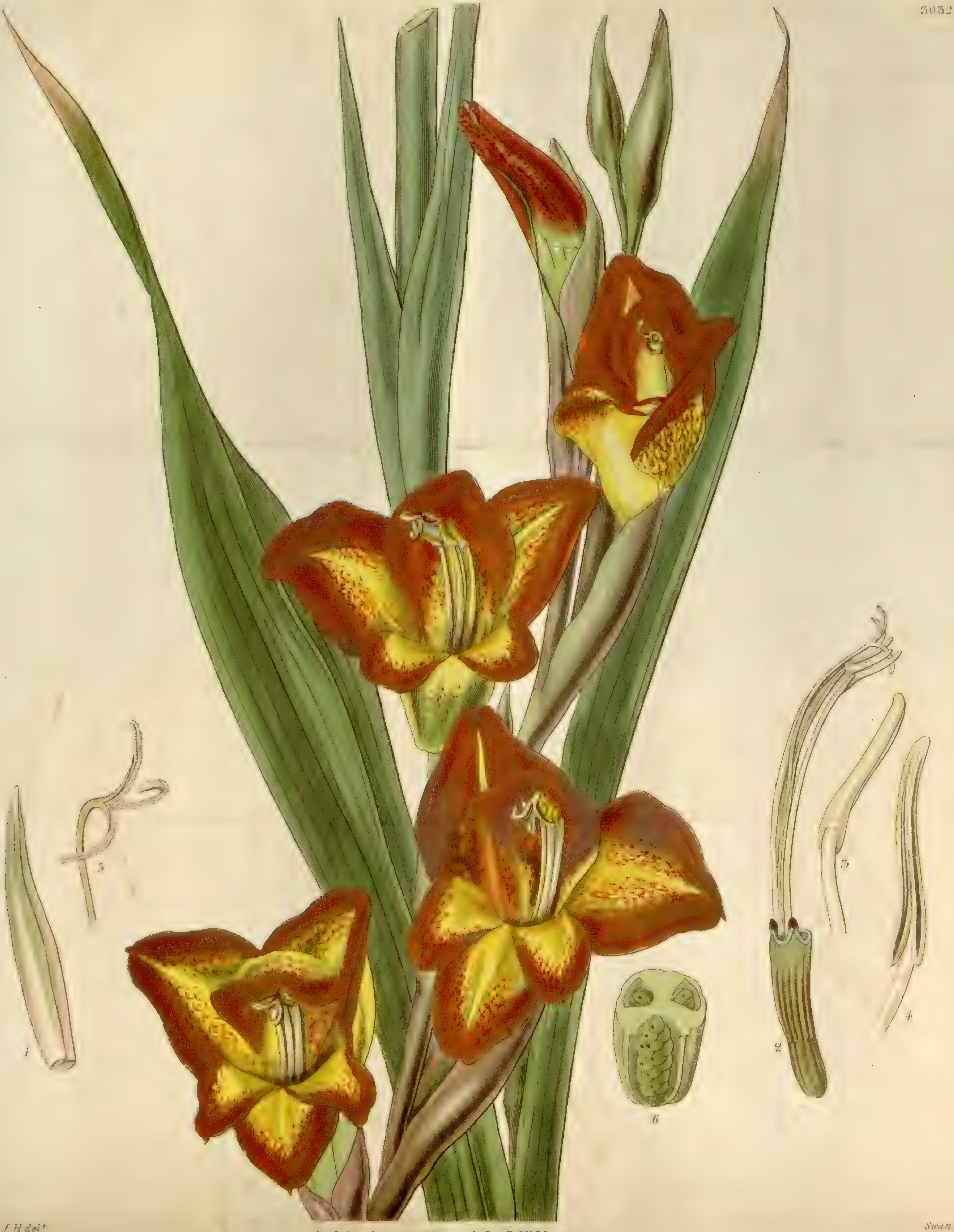
* From δις, *twice*, and ελυτρον, a *cover*, in allusion to the two petals terminating in a bag or pouch. It is by mistake often spelled *Diclytra.*

Living specimens of this delicate and interesting plant, sent from Canada by Mr. CLEGHORN, and which have flourished in the Botanic Garden of Glasgow, have satisfied me that Mr. GOLDIE is perfectly correct in considering it as quite a distinct species, and that I have been wrong in the "Flora Bor. Americana" in referring it to a state of DIELYTRA *eximia*.

As far as I am aware, it is quite unknown in any British garden, save that just mentioned; nor have I ever seen dried specimens, except those gathered by Mr. GOLDIE in Canada. Yet none of the family of FUMARIACEÆ deserves better to be cultivated. Being still scarce in the Glasgow Botanic Garden, the able curator, Mr. MURRAY, has hitherto kept it in a cool frame during the winter, where it flowered in April of the present year, 1830.

Fig. 1. Flower, from which two of the Petals are removed. 2. One of the bundles of Stamens. 3. Stigma.—*Magnified.*



W. J. H del.

Pub. by S. Curtis, Walworth, Dec. 1 1830.

Swan S.

GLADIOLUS PSITTACINUS. SPLENDID CORN-FLAG.

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Class and Order.

TRIANDRIA MONOGYNIA.

(Nat. Ord.—IRIDEÆ.)

Generic Character.

Cor. tubulosa, limbo 6-partito, irregulari. *Stamina* adscendentia. *Stigmata* filiformia, indivisa. *Semina* alata. *Spr.*

Specific Character.

GLADIOLUS* *psittacinus;* foliis ensiformibus bicostatis obscureque nervosis, corollæ limbo campanulato laciniis obtusis mucronatis, tribus exterioribus late ovatis, tribum interiorum suprema obovata concava, reliquis oblongis.

DESCR. *Stem* three feet high, erect, rigid, stout, clothed for the greater part of its length with the sheathing bases of the leaves. *Leaves* distichous; the lower ones a foot or more long, ensiform, attenuated, rather rigid, having two principal nerves or costæ, and several lesser and more obscure ones. *Spikes* terminal, a foot or more long, of many, (ten to twelve,) bifariously inserted, but secund and truly splendid *flowers.* Each is surrounded for more than half its length with a double convolute sheath; the inner one pale yellow-green, the outer ones larger and purplish. *Tube of the Corolla* about half the length of the flower, greenish with purple streaks, expanding upwards into a campanulate, and, at the mouth, much spreading *limb*, of which the three outer laciniæ are considerably the largest, nearly equal, broadly ovate; the inner and upper one obovate and concave, the two inner and lower ones oblong and reflected, all obtuse and mucronate. The general colour of the three upper laciniæ is a rich scarlet, with a central, deep yellow line, and spotted with yellow at the base, that of the three lower ones a rich yellow scarlet at the extremity. In the state of bud, the colour is a deep velvety purplish-blood colour, with obscure yellow spots. *Stamens* fixed within the tube below the middle. *Filaments* ascending. *Anthers* yellowish, linear-sagittate, the margins of the cells purple. *Style* as long as the stamens: *Stigmas* linear, furrowed and downy within; *Germen* oblong, with six, obscure furrows, three-celled: each cell bearing, in the central angle or axis, several imbricated, obovate *ovules*.

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* From *gladius,* a sword, in allusion to the shape of its leaves.

For this truly splendid addition to the *hardy* bulbous plants of our collections, we are indebted, in part to RICHARD HARRISON, Esq. of Liverpool, in whose garden at Aigburgh it flowered during the latter part of the summer and autumn of the present year (1830), and in part to Mr. HITCHIN of Norwich, the eminent cultivator of Succulent plants. On taking up the root, at the end of the flowering season, Mr. HARRISON was surprised to find the solitary original bulb had been replaced by several fine large ones, and, between them lay hundreds of gemmæ, each of which is doubtless capable of forming a new plant. These, we will venture to say, will be distributed with a liberality very different from the line of conduct pursued by the gardener at Leyden, in Holland, where Mr. HARRISON first saw the plant; and who, upon this gentleman's expressing a wish to possess a bulb, offered to send him one, "*when* he should have received a collection of Orchideous plants from Mr. HARRISON." Such a want of confidence towards a well-known Horticulturist, could not impress our friend with a very favourable opinion of the possessor of this charming *Gladiolus*, and of course he declined all further communication with him. On his return, no sooner were Mr. HARRISON's wishes made known to Mr. HITCHIN, than he wrote to his friend and fellow-cultivator of Succulents, the Prince DE SALM DYCK, for a bulb of GLADIOLUS *psittacinus*, and it was forwarded to Mr. HARRISON forthwith.

Our figure only represents the upper half of the spike of the plant, and though we have taken the utmost pains in the colouring of the flowers, their hues fall far short of the rich tints of the original.

Fig. 1. Inner Spatha. 2. Pistil and Stamens, and base of the Corolla, with which the latter are combined: *nat. size*. 3. Back view of an Anther. 4. Front view of ditto. 5. Stigmas. 6. Section of the Germen.—*Magnified.*

W J H del^t

Pub. by S. Curtis Walworth Dec^r 1 1830

Swan Sc

ALSTRŒMERIA PSITTACINA. PARROT-FLOWERED ALSTRŒMERIA.

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Class and Order.

HEXANDRIA MONOGYNIA.

(Nat. Ord.—AMARYLLIDEÆ.)

Generic Character.

Perianthium corollaceum, subcampanulaceum, sex-partitum, irregulare, laciniis duabus (vel tribus interioribus) basi tubuloso-conniventibus. *Stam.* 6, laciniis inserta, demum declinata. *Stigma* trifidum. *Capsula* trilocularis, loculis polyspermis.—Caulis *erectus, scandens, aut volubilis, foliatus.* Flores *umbellati.* Kunth.

Specific Character and Synonym.

ALSTRŒMERIA *psittacina ;* caule erecto flexuoso, foliis oblongo-lanceolatis obtusis basi attenuatis tortis, petalis spathulatis acuminulatis tribus interioribus angustioribus, pedunculis unifloris.

ALSTRŒMERIA psittacina. *Lehm. Cat. Hort. Hamb.* 1826. *Roem. et Sch. v. 7. p. 739. Sweet, Br. Fl. Gard. N. S. t.* 15.

DESCR. *Stems* short, erect, but flexuose, glabrous, some of them sterile with a crown of broadly oblong, spathulate, twisted leaves; others taller, with distant, scattered, linear-oblong, twisted *leaves,* attenuated at the base, all of them obtuse. *Umbel* terminal, of from four to six *flowers,* surrounded by an involucre of four or five leaves, similar to those of the stem, but smaller. *Peduncles* angular, unbranched. *Corolla* subcampanulate, of six linear-spathulate, shortly acuminated *petals,* of a beautiful red colour, green at the apex, and there only marked, both within and without with small, oblong, brown spots, the three inner ones narrower than the rest. *Filaments* slender, glabrous, pale rose-coloured. *Anthers* oblong, green. *Germen* inferior, turbinate, angled. *Style* as long as the stamens, slender: *Stigma* trifid.

This plant has flowered in the greenhouse both in the Edinburgh and Glasgow Botanic Gardens, having been received from its original describer, Professor Lehmann of Hamburgh.

It is said to be a native of Mexico, and is certainly well deserving a place in every collection from the singular colour of its flowers. In Mr. Barclay's garden at Bury Hill it has blossomed in the open border.

Fig. 1, 2. Petals. 3, 3. Stamens. 4. Pistil:—*nat. size.*

W.J.H del.t

Pub. by S. Curtis Walworth. Dec.r 1. 1830.

Swan Sc

CROTALARIA VERRUCOSA. WARTED CROTALARIA.

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Class and Order.

DIADELPHIA DECANDRIA.

(Nat. Ord.—LEGUMINOSÆ.)

Generic Character.

Cal. 5-lobus, subbilabiatus, *lab. sup.* bi-, *infer.* 3-fido. *Cor.* vexillum cordatum magnum, carina falcato-acuminata. *Filamenta* omnia connexa, vagina sæpius superne fissa. *Stylus* lateraliter barbato-pubescens. *Legumen* turgidum, valvis ventricosis inflatum, sæpius polyspermum, pedicellatum. *De Cand.*

Specific Character and Synonyms.

CROTALARIA *verrucosa;* stipulis lunatis declinatis, foliis simplicibus ovalibus, ramis acute tetragonis, racemis terminalibus, germinibus villosis.

CROTALARIA verrucosa. *Linn. Sp. Pl. p.* 1005. *Willd. Sp. Pl. v.* 3. *p.* 977. *Andr. Rep. t.* 308. *Ait. Hort. Kew. ed.* 2. *v.* 4. *p.* 272. *De Cand. Prodr. v.* 2. *p.* 125. *Spreng. Syst. Veget. v.* 3. *p.* 237. *Bot. Reg. t.* 1137.

CROTALARIA cærulea. *Jacq. Ic. Rar. t.* 144.

CROTALARIA angulosa. *Lam. Dict. v.* 2. *p.* 197. *Cav. Ic. v.* 4. *t.* 321.

DESCR. Annual. *Stem,* in our specimen, a foot or more high, acutely quadrangular, branched. *Leaves* generally oval, more or less attenuated at the base into a short petiole, simple, entire, obtuse at the extremity, sometimes acute, sometimes retuse with a mucro, glabrous. *Stipules,* one on each side the short petiole, lineate, deflexed. *Racemes* terminal, of six to eight rather large and handsome

flowers. *Calyx* somewhat two-lipped, five-cleft, green, glabrous. *Standard* of the corolla bent back, its sides inflected, greenish-white, streaked with pale blue within; *wings* obovate, yellowish-white at the base, the rest deep purple: *keel* whitish, yellow at the point. *Stam.* monadelphous; five of the *anthers* oblong, five roundish: all yellow. *Germen* oblong, hairy. *Style* linear.

This plant, although not frequently seen in our collections, is by no means unornamental, the flowers resembling in their colour some species of *Lupine*. The great objection to it, as an inhabitant of the stove, is its being annual. We have received seeds from various of our correspondents, both in the East and West Indies: and it is probably a general native of tropical countries.

Fig. 1. Keel of the Corolla. 2. Stamens and Pistil.—*Magnified.*

3035.

W.J.H del.
Pub by S. Curtis Walworth Dec. 1.1830.
Swan Sc.

PAPAVER CROCEUM. ORANGE-FLOWERED POPPY.

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Class and Order.

POLYANDRIA MONOGYNIA

(Nat. Ord.—PAPAVERACEÆ.)

Generic Character.

Cal. diphyllus, caducus. *Pet.* 4. *Stigma* sessile, radiatum. *Caps.* supera. *Semina* numerosa, receptaculis parietalibus dissepimentiformibus inserta.

Specific Character and Synonym.

PAPAVER * *croceum;* foliis subbipinnatifidis vix pilosis sæpe pilis arcte appressis, germine ovali calycibusque densissime fusco-hispidis, capsula oblonga.

PAPAVER croceum. *Ledebour, Reise durch das Alt. p.* 113. *Ejusd. Fl. Alt. ined.*

DESCR. *Root* apparently perennial, descending deep into the ground, and bearing at its crown or summit, numerous, erecto-patent, pinnatifid *leaves;* the segments again somewhat divided; three to five or six inches long, petioled, almost free from hairs, except at the margin of the base of the petiole, which is ciliated, and at the extremity of each segment of the leaf, which is mostly terminated with a hair. *Scape* a foot and more high, hairy, or rather bristly, with the hairs erect, appressed. *Flower* terminal, solitary. *Calyx* of two elliptical, concave, green leaves, clothed with long, spreading, brown hairs. *Petals* four, subrotundate, wavy, of a beautiful orange-yellow colour. *Stamens* numerous, yellow. *Filaments* slender. *Anthers* linear, two-celled. *Germen* oval, green, clothed with numerous, erect, and appressed purplish-brown bristles. *Stigma* sessile, seven-rayed, yellow. *Capsule* oblong, seven-ribbed, hispid.

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* Derived, according to THÉIS, from *papa,* in Celtic, a kind of soup or pap, into which the seeds of the Poppy were put, to induce sleep in those that ate of it.

Our Botanic Garden of Glasgow is indebted to Professor LEDEBOUR of Dorpat for the possession of this beautiful species of PAPAVER; which, nearly allied as it assuredly is to PAPAVER *nudicaule*, is, nevertheless, truly distinct from it. The learned Botanist just mentioned, speaks of its discovery in his interesting Travels to the Altai Mountains (Berlin, 1829): where, describing his excursion from Riddersk, along the river Grammatucha, " The old bed of this river," he says, " is remarkable for the quantity of débris from the surrounding country, and here it was I found a Poppy with an orange flower (PAPAVER *croceum, mihi*), but by no means plentiful, and allied to PAPAVER *nudicaule*." This was on the 18th of May, when vegetation in general was almost destroyed by a severe hail-storm.

In the open border of our garden, it flowered in the month of June, along with the large variety of the P. *nudicaule;* surpassing it in beauty, and not exceeded even by the ESCHSCHOLZIA *californica* and HUNNEMANNIA *papaveracea*. Dr. FISCHER's P. *nudicaule*, var. *rubro-aurantiacum*, from the Altai, may be the same as this; but the *var.* of *nudicaule* in the Bot. Mag. referred to it by DE CANDOLLE, is surely very different: and has the hairs of the scape patent.

Fig. 1. Stamen. 2. Pistil. 3. Capsule.—*Magnified.*

W.J.H. del^{t}

Pub. by S. Curtis, Walworth. Dec^{r}. 1. 1830.

CALCEOLARIA BICOLOR. TWO-COLOURED SLIPPER-WORT.

* *********************

Class and Order.

DIANDRIA MONOGYNIA.

(Nat. Ord.—SCROPHULARINÆ.)

Generic Character.

Cal. 4-partitus. *Cor.* bilabiata: labium inferius calceiforme, inflatum. *Caps.* semibivalvis; valvulis bifidis.

Specific Character and Synonyms.

CALCEOLARIA *bicolor;* foliis ovato-cordatis venosissimis rugosis biserratis, pedunculis multifloris dichotomo-umbellatis.

CALCEOLARIA bicolor. *Ruiz et Pav. Fl. Peruv. et Chil. v.* 1. *p.* 16. *t.* 25. *f.* 6. *Pers. Syn. Pl. v.* 1. *p.* 15. *Spreng. Syst. Veget. v.* 1. *p.* 147. *Graham in Edin. Phil. Journ.* 1830.

DESCR. *Plant* somewhat shrubby, every where covered with a soft, short, glandular pubescence. *Stem* two to three feet high, erect, purple at the base, green above, round, much branched. *Branches* nearly round, ascending, or suberect at the base, and above, bent outwards at an obtuse angle. *Leaves* three inches long, two and a half broad, opposite, very rarely ternate, petioled, spreading at right angles to the stem, ovato-cordate, acute, doubly serrated, much veined, waved, wrinkled, the veins and middle-rib prominent behind; *petioles* below nearly half the length of the leaves, shorter above, flattened on the upper side, connate. *Cymes* peduncled, axillary and terminal, dichotomously branched, two opposite, small, subsessile, nearly entire, ovato-acuminate leaves being placed at the primary division of the peduncle, and two flowers on simple pedicels in each cleft, the one ascending and first expanded, the other spreading and deflected. *Calyx-segments* elliptical, the lowest narrower and more acute, the upper ones the shortest. *Corolla* sulphur-coloured, except the inferior half of the lower lip, which is white ; *upper lip* very small ; *lower* one large, many-nerved, linear, compressed, turned upwards, so as with its retuse extremity to touch the upper lip till fully expanded, when it is separated from it a little way, the opening into the lower lip large ; at its base, on the inside, there is a tuft of long hairs, everywhere else the pubescence on the corolla is very short, and at the extremity of the lower lip, it is almost absent. *Stamens* erect, the lower lobes of the large yellow *anthers* projecting from the apex of the upper lip. *Style* rather longer than the stamens, slightly curved downwards at the apex, compressed laterally, withering. *Stigma* small, two-lipped. *Germen* pubescent, pyramidal, grooved on its four sides, bilocular : *ovules* numerous, placed on large, undivided, central placentæ.

Ruiz and Pavon state this species of Calceolaria to be a native of rocky places in Canta; and we obtained the seeds from which our plants were raised, through the kind attention of Mr. Cruckshanks, from Cullnay, in the same province of Peru. They were sown in spring, and the first spcimens came into flower towards the end of July. It is an extremely pretty addition to the already-cultivated species, (now fifteen in all, exclusive of the hybrids, and of the narrow-leaved variety of C. *integrifolia*) resembling in colour the pleasing, subdued tint of C. *scabiosæfolia*. Graham.

Fig. 1. Front view of a Flower, the lower Lip being laid open. 2, 2. Stamens. 3. Pistil.—*Magnified.*

Pub. by S. Curtis, Walworth Dec^r [illegible]

(3037 3038)

LOPHOSPERMUM SCANDENS. CLIMBING LOPHOSPERMUM.

****

Class and Order.

DIDYNAMIA ANGIOSPERMIA.

(Nat. Ord.—SCROPHULARINEÆ.)

Generic Character.

Calyx 5-partitus. *Corolla* campanulata; *limbo* 5-lobo, subæquali. *Capsula* bilocularis, irregulariter dehiscens. *Semina* imbricata, membranaceo-alata.

Specific Character and Synonyms.

LOPHOSPERMUM* *scandens;* foliis cordatis acuminatis inciso-serratis, pedunculis ebracteatis, caule herbaceo.
L. scandens. *Don in Linn. Trans. v. 15, p. 353. Sweet Brit. Fl. Gard. N. S. t. 68.*
BESLERIA scandens. *Sesse et Mocino. MSS.*

DESCR. *Plant* herbaceous, climbing, chiefly by its petioles. *Stem* round, brownish-green, in a very luxuriant state pushing out roots from near the base; *bark* smooth, or somewhat cracked. *Branches* round, opposite, villous, purple at the base, young shoots green. *Leaves* five inches and a half from the base to the apex, and rather more across, numerous, opposite, petioled, deltoideo-cordate, acute, inciso-toothed, villous on both sides, bright green above, paler below, three-nerved, the lateral nerves branched, slightly reticulated, chiefly at the margins, teeth mucronate. *Petioles* purple, villous, as long as the leaf, stout,

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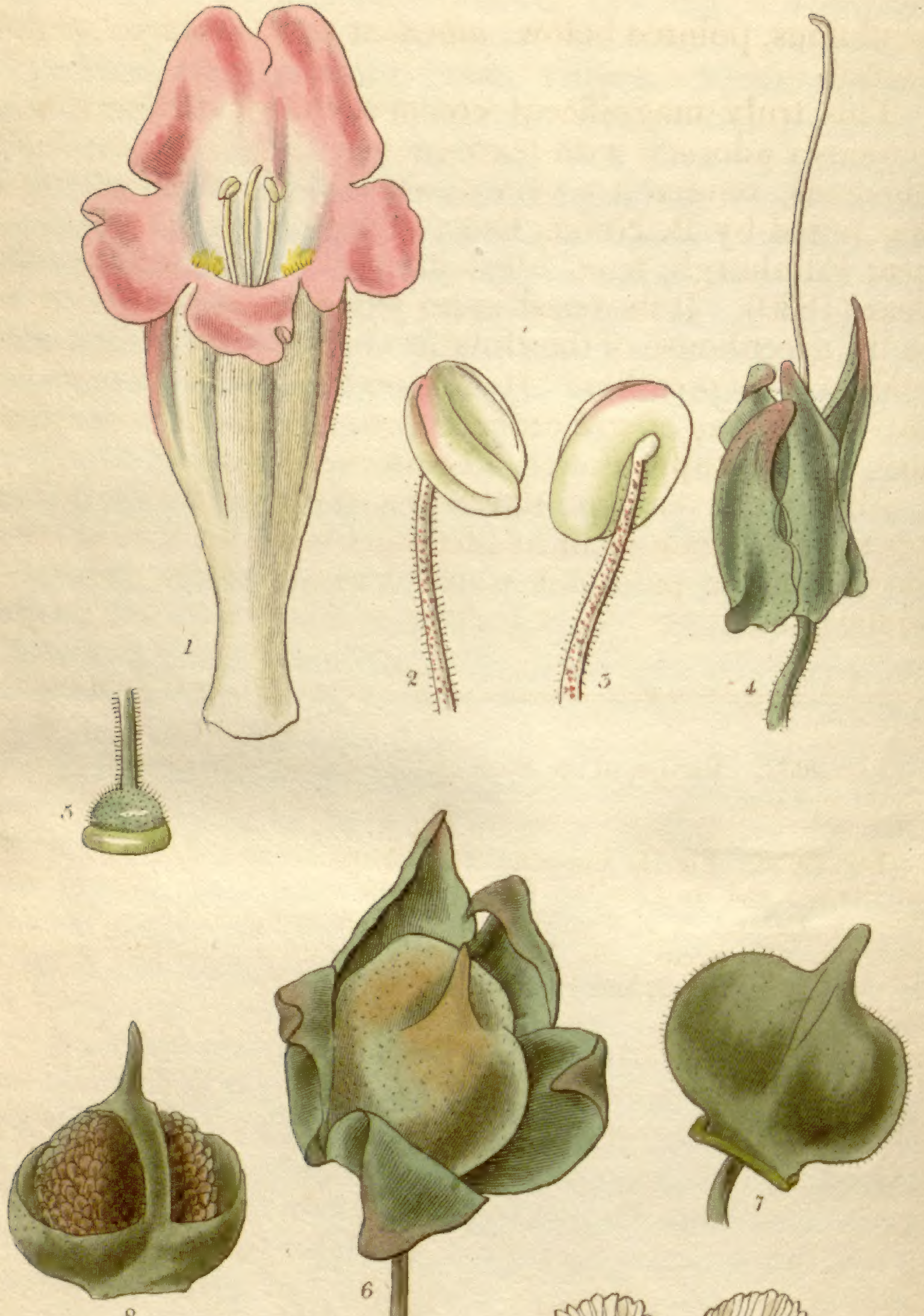
* From λοφος, *a crest*, and σπερμα, *a seed*, from the structure of the seeds.

round, scarcely channelled above, twisting. *Peduncles* axillary, solitary, single-flowered, ebracteate, as long as the petioles, erect, straight, green, villous. *Flowers* spreading horizontally. *Calyx* foliaceous, five-parted, persistent, segments (one inch long, half an inch broad,) subequal, the upper rather the shortest and broadest, ovate, acute, prominent at the edges, veined, pubescent within and without, sometimes becoming purple, entire or rarely auricled at the base. *Corolla* (nearly three inches long, two inches across,) rose-coloured, pubescent everywhere on the outside, campanulate, slightly turgid below; *tube* elongated, somewhat curved downwards, dilated, nectariferous, and nearly colourless at the base, darkish on the upper side, within freckled with rose colour, and having yellow pubescence towards the insertion of the stamens; *limb* spreading, five-parted, segments rounded, subequal, the lowest the smallest, the two upper ones the largest: from the base of the lower segment upon each side, a straight ridge, covered with erect, yellow hairs, extends to the insertion of the two longer stamens. *Stamens* four, didynamous, as long as the tube, from the base of which they arise; *filaments* compressed and adhering for a little way to the corolla and there closing the tube, coarsely pubescent where they become free, at this part purple on the back, beautifully sprinkled with rose-coloured spots or streaks, from which springs a glandular pubescence, especially on the sides of their upper half, straight, diverging slightly, connivent towards their extremities; *anthers* large, bilobular, glabrous, lobes parallel in the bud, afterwards divaricated, bursting along their sides. *Pollen* white, granules small. There is a minute, abortive, fifth stamen, between the two shorter perfect ones, at their origin. *Pistil* as long as the stamens; *stigma* simple, bent nearly at a right angle with the style, colourless, pointed; *style* straight, filiform, smooth above, sparingly provided with glandular pubescence, in its lower half, base persisting; *germen* seated upon a prominent, white, glabrous, and shining *receptacle,* (gland) densely covered with erect, colourless, glandular hairs, bilocular. *Unripe Capsule* crown-shaped, green, colourless at the base, somewhat compressed and furrowed laterally, covered with glandular pubescence, undulate, terminated with the persistent base of the style, included within the calyx. *Ovules* numerous, imbricated, tubercled, stipitate, erect, on two large, central *receptacles,* winged all round; wing radiated, emarginate, somewhat ragged at its edge; nucleus, pendulous,

3038.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W. J. H. delᵗ

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Swan Sc.

pendulous, pointed below: *albumen* large; *embryo* straight, central.

This truly magnificent creeper, whose climbing stems, copiously adorned with leaves and with large, campanulate blossoms, render it a very desirable object of cultivation, was raised by P. NEILL, Esq., in his garden at Canonmills, near Edinburgh, from Mexican seed, in the spring of last year (1830). It flowered in his stove in the beginning, and in the greenhouse of the Botanic Garden, Edinburgh, in the middle of September. It also possesses the advantage of thriving in the open border, where its flower-buds are now making their appearance. GRAHAM, MSS.

Mr. SWEET remarks, that when this plant flowers in the open air, the colour of its blossoms becomes a deep purple, instead of the pale pink which it assumes, when cultivated under glass.

TAB. 3037. Portion of the Stem of LOPHOSPERMUM *scandens*, and a lower Leaf: *nat size.*

TAB. 3038. Fig. 1. Corolla. 2, 3. Stamens. 4. Calyx with its Pistil. 5. Germen and its Glands. 6. Capsule in its Calyx. 7. Capsule removed from the Calyx. 8, 9. Two views of the Capsule cut open so as to show the insertion of the Seeds. 10, Single Seed : *magnified.* 11. Seeds : *nat. size.* All but fig. 6, 7, 8, 9, and 11, more or less *magnified.*

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3026 ——— stone.
3028 Selago, Dr. Gill's.
2965 Sisyrinchium, long-stalked.
3036 Slipper-wort, two-coloured.
2975 Speedwell, alpine, Wormskiold's *variety.*
2993 Sphacele, large-flowered.
2992 Spurge, white-flowered.
3023 Squill, dwarf.
2968 Tanghin, poison.
3004 Terminalia, broad, downy-leaved
3002 Trillium, blood-stained.
3011 Trumpet Flower, gigantic-leaved.
2956 Ulantha, large-flowered, *under the name Neottia? large-flowered.*
3014 Vangueria, velvetty.
3027 Viper's-Grass, soft.
3019 Yellow-root, Canadian.